

University of Windsor

Scholarship at UWindor

Electronic Theses and Dissertations

Theses, Dissertations, and Major Papers

1980

The validity of astrology with regard to extroversion and femininity.

Michael. Rockowitz
University of Windsor

Follow this and additional works at: <https://scholar.uwindsor.ca/etd>

Recommended Citation

Rockowitz, Michael., "The validity of astrology with regard to extroversion and femininity." (1980).
Electronic Theses and Dissertations. 4347.
<https://scholar.uwindsor.ca/etd/4347>

This online database contains the full-text of PhD dissertations and Masters' theses of University of Windsor students from 1954 forward. These documents are made available for personal study and research purposes only, in accordance with the Canadian Copyright Act and the Creative Commons license—CC BY-NC-ND (Attribution, Non-Commercial, No Derivative Works). Under this license, works must always be attributed to the copyright holder (original author), cannot be used for any commercial purposes, and may not be altered. Any other use would require the permission of the copyright holder. Students may inquire about withdrawing their dissertation and/or thesis from this database. For additional inquiries, please contact the repository administrator via email (scholarship@uwindsor.ca) or by telephone at 519-253-3000ext. 3208.



National Library of Canada
Collections Development Branch

Canadian Theses on
Microfiche Service

Bibliothèque nationale du Canada
Direction du développement des collections

Service des thèses canadiennes
sur microfiche

NOTICE

The quality of this microfiche is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us a poor photocopy.

Previously copyrighted materials (journal articles, published tests, etc.) are not filmed.

Reproduction in full or in part of this film is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30. Please read the authorization forms which accompany this thesis.

**THIS DISSERTATION
HAS BEEN MICROFILMED
EXACTLY AS RECEIVED**

AVIS

La qualité de cette microfiche dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de mauvaise qualité.

Les documents qui font déjà l'objet d'un droit d'auteur (articles de revue, examens publiés, etc.) ne sont pas microfilmés.

La reproduction, même partielle, de ce microfilm est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30. Veuillez prendre connaissance des formules d'autorisation qui accompagnent cette thèse.

**LA THÈSE A ÉTÉ
MICROFILMÉE TELLE QUE
NOUS L'AVONS REÇUE**

THE VALIDITY OF ASTROLOGY WITH REGARD, TO
EXTROVERSION AND FEMININITY

C

by

Michael Rockowitz

B.A. Queens College, 1976

A Thesis
Submitted to the Faculty of Graduate Studies
through the Department of Psychology
in Partial Fulfillment of the
Requirements for the Degree
of Master of Arts at the
University of Windsor

Windsor, Ontario, Canada.

1980

© Michael Rockowitz 1980

739219

ABSTRACT

The validity of astrology with regard to extroversion-intraversion and masculinity-femininity was investigated by determining whether a relationship exists between astrological and psychological "measures" of these dimensions. Psychological measures used were: the extroversion scale of the Eysenck Personality Inventory; the Fe scale of the California Psychological Inventory; and the Bem Sex-Role Inventory. Six tests of the validity of astrology were performed-four relating to extroversion and two relating to femininity. Three of these tests-two concerning extroversion, one concerning femininity-were attempts to confirm previous significant astrological findings. Subjects were 234 undergraduates (66 males and 168 females whose mean age was 22.7) of whom only 135 provided the precise time-and-place-of-birth information necessary for the four tests of astrology's validity which involved astrological variables other than sun sign. No relationships were discovered between astrology-based means of estimating degree of extroversion or femininity, and the corresponding psychological measures. These results cast doubt upon the reliability of significant findings reported by two previous studies on astrology.

ACKNOWLEDGMENTS

I am indebted to many people who aided me in this investigation.

I would like first of all to thank Dr. William Libby, the chairman of my thesis committee, for his guidance and encouragement during this project. I would also like to thank the other members of my committee, Dr. Neal Holland and Dr. Arthur Smith from the psychology department, and Dr. Adolf Ehrentraut from the sociology department, for their invaluable suggestions as to the design and execution of this study.

In addition, I want to express my gratitude to the following other people: to Janet George, Marc Lewis, Carmela Pakula, Terry Vallano, Ernst Hofmann, Cathy Miller, Gerry Smith, Helen Avigan, Gerry Darcie and Antoon Leenars, for having performed the rating task which yielded one of the astrological "scales" of extroversion of experiment #1; to Lois Healy, David Hand and Jeanette Snyder, astrologers whose ratings yielded the other four astrological extroversion "scales" of experiment #1; to Joanne Beyer, Joanne Karpinen and David Bristol, people seriously involved with astrology who provided feedback about my astrological "scale" of masculinity-femininity; to Dr. Meyer Starr, who provided

assistance with the analysis of some of the data; and
to my wife, Jill, for her love and moral support during
this project.

TABLE OF CONTENTS

Abstract.....	ii
Acknowledgments.....	iii
List of Tables.....	viii
List of Figures.....	x
Chapter I: Introduction.....	1
Basic astrological concepts.....	5
The ecliptic and the zodiac.....	5
The planets and their inter- pretive meaning.....	10
The houses and their inter- pretive meaning.....	12
The aspects and their inter- pretive meaning.....	13
The horoscope.....	15
Interpretation.....	17
Review of the literature.....	18
Personal validation studies.....	18
Astrological-type influen- ces on inanimate processes.....	25
The moon's influence upon behavior.....	28
The sun sign's influence upon behavior.....	30
Studies on other astrologi- cal influences and on com- bined astrological influences.....	35
Astrological studies directly related to the present study.....	38

Hypotheses.....	43
Chapter II: Methodology and Results.....	47
General information concerning subjects.....	47
General procedures.....	48
Experiment #1-attempted valida- tion of astrological "scales" of extroversion-intraversion.....	49
Subjects.....	49
Materials.....	49
Results.....	55
Experiment #2-attempted valida- tion of an astrological "mea- sure of masculinity-femininity.....	58
Subjects.....	58
Materials.....	58
Results.....	64
Experiment #3-attempted confirma- tion of Gauquelin, Gauquelin and Eysenck findings.....	65
Subjects.....	65
Materials.....	66
Results.....	66
Experiment #4-attempted confirma- tion of Mayo, White and Eysenck findings.....	66
Subjects.....	68
Materials.....	68
Results.....	68

Experiment #5-attempted confirmation of Pellegrini's findings.....	72
Subjects.....	72
Materials.....	73
Results.....	73
Other data analyses.....	78
Chapter III: Discussion.....	84
Appendix A: Announcement used to recruit subjects.....	91
Appendix B: Questionnaire packet filled out by subjects.....	93
Appendix C: Statements/statement sets rated by graduate students.....	102
Appendix D: Astrological influences rated by astrologers:;;.....	128
Appendix E: Astrological "scales" (ratings) of extro-version of Experiment #1.....	137
References.....	147
Vita Auctoris.....	151

LIST OF TABLES

Table		Page
1a	Intercorrelations for all variables	56
1b	Meanings of variable abbreviations	57
2	Astrological scale of masculinity-femininity	62
3a	One-way analysis of variance on extroversion scores for the astrological classification variable "H.Pos/Sa-Ma,Ju"	67
3b	Mean extroversion scores of the groups (classification conditions) comprising the "H.Pos/Sa-Ma,Ju" variable	67
4a	3-factor analysis of variance of sun sign and sex on extroversion scores, with sun sign nested within "odd-even" (odd sun signs versus even sun signs)	69
4b	Means and standard deviations on extroversion scores by sex and sun sign	71
5a	3-factor analysis of variance of sun sign and sex on Fe scale scores, with sun sign nested within half-year	74
5b	3-factor analysis of variance of sun sign and sex on BSRI androgyny scores, with sun sign nested within half-year	74
5c	Means and standard deviation on Fe scale scores, by sex and sun sign	76
5d	Means and standard deviations on BSRI androgyny scores, by sex and sun sign	77
6	Point system for determining hemisphere-of-horoscope predominance	79
7	Factor analysis of astrological variables after varimax rotations of principle components	81

LIST OF TABLES (cont'd)

Table		Page
8	Factor analysis of astrological and psychological variables after varimax rotations of principle components	82
9	Guide to abbreviations used in Appendix E	138

LIST OF FIGURES

Figure		Page
1	Natal chart for Dec. 1, 1951, 11:55 PM, New York, N.Y.	16

CHAPTER I

INTRODUCTION

Astrology, a group of beliefs whose major assumption is that the positions of the planets and those of the sun and moon influence the behavior of people and things on earth, is an area in which very little research on the part of psychologists has been done or is presently being done. This is a striking observation when one considers the potential impact of the above astrological assumption upon psychology if it is even partially valid, the number of people who believe, in varying degrees, in the validity of this assumption, and the inherent intriguingness of the question of planetary influences upon behavior, especially human behavior.

Although the rather limited amount of research exploring the validity of astrology has generally resulted in negative findings, a number of researchers in this area have found significant relationships between astrological variables and behavior (Gauquelin, 1960; Cooper and Smithers, 1975; Pellegrini, 1973; Gauquelin, Gau-

quelin, and Eysenck,¹ in press; Mayo, White, and Eysenck,² in press, to mention some of the more provocative studies). Perhaps these significant results are a foreboding of things to come in this area; perhaps astrological types of variables will come to be considered among the major environmental influences upon behavior, and will be accorded an important role in the prediction of behavior. In any event, by neglecting this area of research to a large extent, psychologists may be missing out on some valuable and remarkable information.

Is astrology a theory? Webster's New World Dictionary (1974, p. 619) gives as one of the definitions of a theory "a formulation of underlying principles of certain observed phenomena which has been verified to some degree." By this definition, the area of astrology cannot be viewed as having a theory. It consists rather of what I have called the astrological assumption or hypothesis (i.e., the idea that the positions of the planets, the sun and moon included, affect behavior), plus elaborations of this idea. These elaborations concern the specific influences upon the earth of: each of the planets, and the luminaries (the sun and the moon); each of the 12 thirty-degree sectors that the planets and luminaries en-

^{1,2}Personal communication from H.J. Eysenck received by Dr. W.B. Libby of the University of Windsor. See reference list for further details on these two studies.

ter during the course of their respective orbits; the angles that the planets and luminaries form with each other in relation to the earth; and the interaction of the earth's rotation upon its axis (which rotation is divided into 12 sectors called houses) with the rest of these factors. But the vast majority of these asserted specific astrological influences have not even been empirically tested, much less verified, and no convincing underlying principles concerning how planetary positions and other types of astrological influences affect earthy events have been put forward, by astrologers or anyone else. Nevertheless, from a strictly empirical point of view, some significant patterns of data of an astrological nature have emerged. These data, and the experiments which generated them, have provided the inspiration for the present study.

Upon what are traditional astrological assertions about the influences of the various astrological "variables" (planetary positions, signs of the zodiac, aspects, etc.) based? Are they merely the result of the ancient Greeks and Romans having assigned to the various planets the characterological attributes of the various gods, with some complex chains of arithmetical calculation thrown in for good measure? Are they merely groundless superstitions? Or are a certain proportion of them based upon empirical observations of relationships between behavior and planetary positions made long ago? The pres-

ent study takes seriously the possibility that this latter idea is true.

It can strongly be argued that it is psychology, and not some other area, whose obligation it is to investigate experimentally relationships between organismic behavior and the position of astronomical objects, especially those relationships of this sort suggested by astrology. After all, astrology makes statements which, for the most part, concern the behavior of the individual organism, rather than the behavior of groups or of individual cells.

Natal astrology relies upon the drawing up of a picture or map of the solar system for the exact time of a given individual's birth. On the basis of the map or "natal chart," two kinds of predictions can be made: predictions about the individual's personality traits; predictions about what will happen in the future to the individual in question. Astrological statements made about personality traits are predictions, and not merely statements per se, because they are derived from the natal chart, which could be drawn up before the individual in question was ever born. The use of astrological material as the basis of making statements about the direction and strength of certain personality variables (specifically, introversion-extraversion and masculinity-femininity) is the primary investigative concern of this study.

The present study involved six "experiments" in all (including the experiment under the heading "Other data analyses"). Four of these investigated the validity of

the purported relationship between certain astrological variables and the personality dimension of extroversion-intraversion; the other two experiments similarly explored the validity of the relationship between astrological variables and the masculinity-femininity (also known as sex-role identity) personality dimension. For each of the two personality dimensions involved in this study, a way was devised for taking account of and quantifying the astrological variable in a manner which, from the standpoint of traditional astrology, is more accurate and comprehensive way than has been employed in past studies. These new ways of quantifying the astrological variable are employed in two of the experiments in the present study. Three of the remaining four experiments of this study attempted to confirm the results of previous studies which found a relationship between the above-mentioned personality dimensions and certain astrological variables.

Basic Astrological Concepts

The ecliptic and the zodiac. The ecliptic can be defined as the plane of the earth's orbit around the sun. It can be conceived of as an imaginary circle passing through the center of the earth, which bisects the equator, and at its furthest point (from the equator) is $23\frac{1}{2}$ degrees away from it. The plane of this imaginary circle is extended into space in all directions, intercepting the center of the sun as well as that of the earth. The zodiac

is the apparent path in space around which the luminaries and planets seem to travel when viewed from the earth, whose center is the ecliptic. It extends nine degrees on either side of the ecliptic, making it 18 degrees wide. This circular 360 degree "belt" of the zodiac encompasses the orbits of all of the planets of the solar system, plus that of the moon. Twelve sections of 30 degrees each divide the Zodiac, and each of these sections constitutes one of the astrological "signs" of the zodiac.

Each of the signs of the zodiac has interpretive significance in astrology, and whenever a given planet or luminary moves into one of these signs, its effect upon the earth is modified according to the meaning that astrologers attribute to the sign in question. Here are some adjectives associated with the interpretive meaning of each sign, taken from Sehested (1973):

» Aries: Assertive, energetic, courageous, ardent;
or, aggressive, angry, egotistical,
impulsive.

Taurus: Conservative, reliable, steadfast,
patient; or, greedy, stodgy, possessive,
obstinate.

Gemini: Intellectual, versatile, communicative,
alert; or, nervous, undependable, impatient,
unable to concentrate.

Leo: Creative, vital, commanding, expansive, regal; or, pleasure-seeking, domineering, lazy.

Virgo: Practical, modest, analytic, unassuming; or, reticent, overdiscriminating, aloof, overcritical.

Libra: Harmonious, affable, diplomatic, balanced, thoughtful; or, indecisive, vapid, discontented.

Scorpio: Intense, passionate, penetrating, genuine; or, blunt, cruel, lustful, vindictive.

Sagittarius: Expansive, free, enthusiastic, profound; or, reckless, outspoken, excessive, boisterous.


Capricorn: Cautious, ambitious, serious, stable, organized; or, cold, limited, miserly, fearful.

Aquarius: Instructive, inventive, aspiring, changeable, unconventional; or, revolutionary, detached, cool, rebellious.


Pisces: Intuitive, inspired, sensitive, intangible; or, vague, oversentimental, confused, self-pitying.

Western astrologers commonly classify certain interpretive qualities of the various zodiacal signs on the basis of the ancient conception of four basic "elements," fire, earth, air and water. For example, the element "fire" includes the signs Aries, Leo, and Sagittarius, and is associated with energy, vitality, enthusiasm and activity. Signs in the earth element (Taurus, Virgo, and

Capricorn) are associated with practicality, perseverance and patience. Generally speaking, astrologers consider the signs in the "fire" element and the signs in the "air" element (Gemini, Libra, and Aquarius) to involve qualities that are more extraverted than do the signs in the "earth" element or the signs in the "water" element (Cancer, Scorpio, and Pisces), which are considered to encompass qualities that are of a more introverted nature. This division of signs into those more "introverted" and those more "extroverted" has received some empirical validation from a study by Mayo, White, and Eysenck (in press), in which it was found that people born under "introverted" sun signs are in fact more introverted than those born under sun signs that have extroverted interpretive qualities. This Mayo, White, and Eysenck (in press) study is among the studies which will be (approximately) replicated in the present study.



The signs of the zodiac should not be confused with the constellations of stars which bear the same names. There is, however, a connection between the two. Roughly two thousand years ago, each sign of the zodiac was named according to the constellation of stars that was in the particular sign that the sun was in in the course of its apparent orbit around the earth. For example, when the sun was in the zodiacal sign Aries at 0 degrees, the stellar constellation Aries was able to be seen at



the point where the sun set each evening. This is no longer the case, because the equinoctial points on the earth where the ecliptic bisects the equator (the vernal and autumnal equinoxes, or, 0 degrees Aries and Libra respectively) move forward by 50 minutes of arc each year, due to gravitational effects of the sun and the moon upon the earth's rotation on its axis. This phenomenon, known as precession of the equinoxes, has resulted in the moving forward of the equinoctial points by roughly $23\frac{1}{2}$ degrees during the past two thousand years, putting the constellations of stars for which the signs of the zodiac were named as many degrees "out of sync" with the zodiacal signs as they occur today. Thus, when the sun is in 0 degrees Aries, it actually has the star constellation Pisces in back of it when it sets; the star constellation Aries will not be found at the point at which the sun sets for another few weeks.

Astrologers today continue to employ a geocentric (earth-centered) conceptualization of the universe rather than a heliocentric (sun-centered) one, even though this manner of viewing the solar system became obsolete following Copernicus's revelations in the sixteenth century. They do this in order to more readily study the "effects" of the other planets of the solar system upon the earth. After assuming the earth to be the center of the solar system (or of the universe, for that matter), one can then go on to make perfectly true statements about the positions of the planets and the luminaries relative to

the earth. The horoscope is basically a "map" of the planets and luminaries of the solar system relative to earth, at the time of birth.

The planets and their interpretive meaning. According to traditional astrology, each planet has its own characteristic influence upon the earthly events. Some nouns which, according to Sehested (1973), are associated with the interpretive meaning of each planet are:

Sun: The basic person, vitality, power, dignity, confidence; or, arrogance, conceit, egotism.

Moon: The subconscious, reaction, response, domestic matters, emotions; or, moods, inconsistency, introversion.

Mercury: The conscious mind, communication, intellectual and educational matters, expression; or, criticism, restlessness, indecisiveness, nervousness, tension.

Venus: Love, harmony, artistic pursuits, beauty, gentleness; or, indolence, laziness, weakness.

Mars: Energy, heat, mechanical ability, activity; or, aggressiveness, recklessness, accidents, irritability.

Jupiter: Abundance, benevolence, optimism, happiness, development; or, excess, extravagance, extremism.

Saturn: Patience, coolness, caution, organization,

aspiration, control; or, limitation, cold, pessimism, loss, depression.

Uranus: Change, originality, individuality, inventiveness; or, eccentricity, rebellion, disruption, willfulness.

Neptune: Idealism, intuition, imagination, creativity, inspiration; or, vagueness, impracticality, deception, dreaminess.

Pluto: Regeneration, elimination, the masses, co-operation; or, compulsion, crime, subversion.

"Planetary rulership" in astrology refers to the idea that for each sign, there is one (and in some cases, two) planet(s) whose interpretive significance is similar to it, by which the sign is thus "ruled." It also involves the idea that if a particular sign in a given natal chart has special significance (e.g., if it is the astrological sign that the ascendant is in), then the planets that "rule" that sign also have special interpretive significance. Listed below are the signs of the zodiac and their rulers:

<u>Sign</u>	<u>Ruler</u>
Aries	Mars
Taurus	Venus
Gemini	Mercury
Leo	Sun
Cancer	Moon
Virgo	Mercury

<u>Sign</u>	<u>Ruler</u>
Libra	Venus
Scorpio	Mars, Pluto
Sagittarius	Jupiter
Capricorn	Saturn
Aquarius	Saturn, Uranus
Pisces	Jupiter, Neptune

The houses and their interpretive meaning. The daily period of rotation of the earth upon its axis has been divided by astrologers into twelve numbered sections, called houses, in much the same way that the circle of the zodiac is divided into 12 signs. Taking the earth as the center of the solar system, each planet appears to cross all 12 houses daily, just as the sun crosses all 12 signs of the zodiac in one year.

Here are some of the activities considered by astrologers to be encompassed by each of the houses, according to Sackoian and Acker (1973):

1st house: The physical body, the self, the early environment.

2nd house: Money, possessions, earning ability.

3rd house: Siblings, short journeys, communication.

4th house: The home, the end of life.

5th house: Children, sensory pleasures, social life.

6th house: Health, work, service.

7th house: Partnerships, public relations, open enemies.

8th house: Death, regeneration, taxes.

9th house: Philosophy, law, religion, long trips, higher education.

10th house: Profession, status.

11th house: Friends, hopes, wishes.

12th house: Limitations, secret enemies, self-defeating activities.

The houses are divided by lines called cusps. The first cusp is referred to as the ascendant (as is the first house), and is determined by the point where the eastern horizon of the place of birth (i.e., the longitude and latitude of birth) intercepts the ecliptic at the time of birth. Astrologers consider the ascendant to have great interpretive significance. The calculation of the remaining cusps is also dependent on the time and place of birth.

The aspects and their interpretive meaning. Aspects are angles formed between two planets (luminaries included) with the earth taken as the apex of the angle. According to astrologers, some of these angular relationships between planets influence the behavior of organisms on earth, although their specific effect is supposed to be modified by the interpretive meanings of the planets involved. The angles considered by astrologers to have the greatest influence upon events on the earth in general are

the conjunction (an angle of 0 degrees formed when two planets occupy the same position of the zodiac), the sextile (angle of 60 degrees), the trine (angle of 120 degrees), the square (angle of 90 degrees), and the opposition (angle of 180 degrees). The interpretive meaning of the conjunction can be either positive (benevolent) or negative (malevolent), depending upon how the two planets involved combine in producing effects upon the earth. The trine and sextile have roughly similar interpretive meanings-they result in luck and good fortune. The square and opposition also have roughly similar interpretive meanings-these angles, however, result in bad luck, difficulty, and struggle.

An orb is the amount of leeway in measurement allowed in determining if an aspect exists. For example, if a square was suspected between two planets, any angle between them that was less than or equal to 100 degrees, or greater than or equal to 80 degrees, (i.e., 90 degrees \pm 10 degrees) might be considered as a square. Although there is a certain amount of variation among astrologers in their rules for measuring orbs, the size of the allowable orb generally varies somewhat according to whether planets or luminaries are involved, and the type of aspect involved.

According to traditional astrology, an aspect has its strongest interpretive significance (i.e., has its strongest influence upon a given event on the earth) when

the orb is "narrow" (roughly speaking, when it is between 0 and four degrees), and when the two planets involved are "approaching", i.e., when they are both moving towards positions where the orb will be 0 degrees. If the two planets involved are moving away from positions where their orb was 0 degrees, they are said to be separating, and are considered to influence events and behavior on the earth to a lesser extent than when they were approaching.

The horoscope. Astrologers diagram the above components—signs of the zodiac, planetary positions, houses, etc.—by a type of geocentric map of the solar system which also takes into account the earth's daily rotation upon its axis. Essentially, this "map", the horoscope, shows the positions of the planets, relative to the earth and its daily rotation, for a given moment in time. An example of a horoscope, with the various parts labeled, is shown in Figure 1.

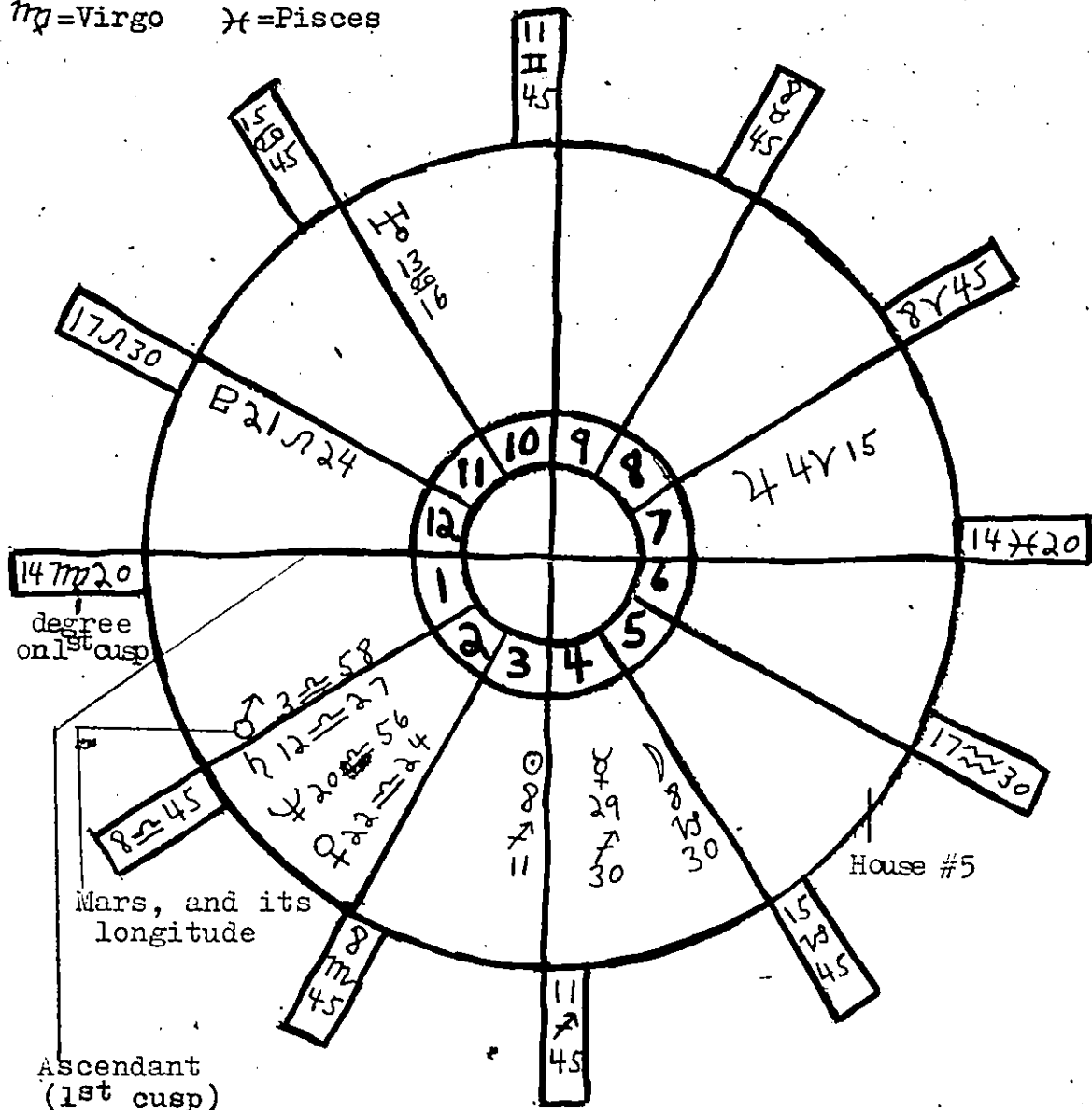
Because of its geocentric orientation, the center of the horoscope of Figure 1 (or any other traditional horoscope, for that matter) represents the earth. The degree of each cusp is labeled. For example, 14^m20 as the degree of the first cusp means that the first cusp is located at 14 degrees 20 minutes of Virgo. It should be remembered that the degrees on the cusps have to do with the earth's daily rotation upon its axis, and increment about one degree every 4 minutes.

Key to Zodiac Sign Symbols

♈=Aries ♎=Libra
 ♉=Taurus ♏=Scorpio
 ♊=Gemini ♐=Sagittarius
 ♋=Cancer ♑=Capricorn
 ♌=Leo ♒=Aquarius
 ♍=Virgo ♓=Pisces

Key to Planet Symbols

☉=Sun ♃=Jupiter
 ☾=Moon ♄=Saturn
 ☿=Mercury ♅=Uranus
 ♀=Venus ♆=Neptune
 ♂=Mars ♇=Pluto



Natal chart for Dec. 1, 1951, 11:55PM, New York, N.Y.

Figure 1

The notation for the planets shows the symbol for the planet in question, then the position of the planet in the zodiac. For example, $\text{♂} 3^{\circ} 58'$ means that mars is in 3 degrees 58 minutes of Libra, and must pass through 26 degrees 2 minutes of Libra before entering the sign Scorpio.

Interpretation. The horoscope, although employing certain frames of reference that are no longer in general use among astronomers (e.g., the house divisions), is nevertheless accurate as concerns the positions of the planets, if properly set up. It is the point at which the astrologer starts to interpret the "meaning" of the horoscope that he begins an act that is singularly astrological, as opposed to being simply astronomical. As one astronomer, Bok (1975) put it:

Astrology claims to foretell the future....This is done through the medium of the horoscope. Anyone with knowledge of beginning astronomy and with an American Nautical Almanac can proceed to draw one. I have found it not a unpleasant pastime on several occasions....

The abracadabra begins when the astrologer starts to interpret a person's horoscope. (pp. 7 and 8)

In interpreting the horoscope, the astrologer attempts to integrate the interpretive meanings of the various components of the horoscope (such as the houses,

the planets in the houses, the planets in the signs, the signs on the cusps of the houses, the aspects, etc.), in order to generate statements about the organism for whom the horoscope is cast. This is a generally extremely complex procedure ("art" may be a more apt word), whose outcome varies to a certain extent, depending on the idiosyncratic proclivities of the astrologer making the interpretation (for further details about this process, see Sehested, 1973). In order to simplify and make reliable this process of interpretation, I devised a structured, astrologically correct method of interpreting natal charts in terms of what the variables they contain reveal about the individual's placement along the personality dimensions of extroversion-~~in~~traversion (see Experiment #1 in the methodology section) and masculinity-femininity (see Experiment #2 in the methodology section).

Review of the literature

Personal Validation Studies. Astrologers (and the practitioners of other relatively esoteric personality assessment procedures such as palm readers and graphologists) have contended that their particular procedure yields an accurate and valid description of personality, because the personality descriptions generated are almost invariably accepted by the person whom they concern as being an accurate description of himself/herself. Moreover, some astrologers might argue that the popularity of

astrology during the past two thousand years, and its persistence into and flourishing during modern times, constitutes further evidence for its validity.

A number of experiments have been performed which have attempted to respond to some of these contentions, based upon the idea that these "irregular assessment procedures" are in fact not valid, but only seem so to the individual who is described by them. These researchers hypothesize that the personality descriptions generated by these practices are very general and universally applicable, but that their target (the person whom they concern) doesn't realize their universal nature, believing the statements to be uniquely true of himself. This usually convinces him of the validity of the procedure involved, or at least shakes his skepticism.

Here is an example of a "universally valid" personality description, taken from Sundberg (1955):

...has a tendency to worry and be moody at times, but not to excess. However, there are days when nothing seems to please him (her) and he (she) is sometimes more enthusiastic and lively than he (she) really feels like being. He (she) is occasionally bothered by physical difficulties, such as headaches, but they seldom get him (her) down. He (she) secretly wishes he (she) had a better developed and healthier body.

He (she) prefers a certain amount of change and variety and becomes dissatisfied when hammed in by restrictions and limitations. He (she) has found it unwise to be too frank in revealing himself (herself) to others. At times he (she) has serious doubts as to whether he (she) has made the right decision or done the right thing. (p.145)

Among the earliest experiments along this line was that of Forer (1949), who gave 39 students a personality test, the Diagnostic Interest Blank (constructed by Forer), and a week later gave all 39 subjects the ostensible "results" of the test, the same "universally valid" personality description. Subjects then rated the validity of the personality sketch they received and rated the Diagnostic Interest Blank as a diagnostic instrument. The vast majority of these students rated the validity of both the personality sketches and the personality test itself highly (87% rated the personality sketches highly; 97% rated the validity of the Diagnostic Interest Blank highly). Forer concluded that validation of a test instrument via personal validation was a fallacious procedure, and suggested that:

A minimum degree of correspondence between the sketch and self-evaluation appears to engender an attitude of acceptance of the

total sketch and this attitude of acceptance is carried uncritically to the test instrument. (p. 123)

Delaney and Woodyard (1974) demonstrated that these "universally valid" statements may have a substantial effect upon an individual's subsequent self-conceptualization. Subjects (39 males and 16 females in High School) read "universally valid" generalized personality descriptions ostensibly derived according to each individual's astrological sun sign, which had been rated previously as being either high or low on the dominance variable and on the change variable of the Jackson Personality Research Form. The subjects then filled out a 100 item questionnaire derived from the Jackson Personality Research Form. The result was that the group of subjects who read the high dominance generalized personality description had a significantly higher group mean on the dominance scale than did the group who read the low dominance personality description. Similarly, for the subjects who read the high change general personality description, a significantly greater mean was shown on the change scale than for the subjects who read the low change personality description.

Snyder (1974) explored the hypothesis that an individual's acceptance of universally valid "horoscope" personality descriptions increases in direct proportion to the specificity of the birth information the individual believes to be involved. He performed an experiment us-

three groups, each of which had 21 subjects. The subjects of one group were each given a written-out universally valid personality description and told that it was "generally true for people"; the second group was given the same generalized personality description but told that it was based upon the year and month in which they were born, and a third group was, again, given the same written personality description but told that it was based upon the year, month, and day upon which they were born. The subjects then rated the degree to which the "horoscope" description fit them. The results confirmed the initial hypothesis--the subjects' acceptance of the description was a direct function of the degree of specificity of (birthdate) information upon which it was ostensibly based. Snyder (1974) went on to speculate that this effect may be even more pronounced for the person who has a professional astrologer draw up and interpret his natal chart, because the professional astrologer makes use not just of the month, year, and day of birth, but also of the hour and minute of birth, in chart erection.

In an experiment performed by Rosen (1975), using undergraduate students as subjects, it was found that the acceptance of "universally valid" personality sketches was not dependent upon the prestige of the source of the interpretation, but upon the essential "validity" of these personality descriptions for most people in and of themselves. Before the experiment began, a "psychologist who used as his source of information the results of a valid

psychological test" received significantly higher mean ratings by subjects as to his capability of making accurate statements about the personality of an individual than did "an astrologer who used as his source of information an individual's birthdate and the birthdates of his parents". All subjects then completed the first 75 items of the Bell Adjustment Inventory and indicated when they and their parents were born. A few days later, all subjects received the same generalized personality interpretation, with roughly half being told that it was based on the results of the psychological test evaluated by a psychologist, the other half being told that it was based on the evaluation of the astrological information they furnished by an astrologer. The results, surprisingly, show that there was no significant difference between the mean ratings of the accuracy of the interpretations for the two groups.

This finding was corroborated by an experiment performed by Snyder, Bloom, and Larsen (1976). These researchers found no significant differences in accuracy-of-personality-interpretation ratings when subjects (68 in each group) believed that the same standard generalized personality description that each received was based on astrological, or graphological, or psychological procedures, even though a faith-in-assessment-procedure rating scale that the subjects filled out prior to the experiment indicated that subjects had significantly more faith in the psychological procedure than in the other two procedures,

and had significantly more faith in the graphological procedure than in the astrological procedure. It was also found in this experiment that, for all assessment procedures, both faith-in-assessment-procedure ratings and perceived-skill-of-diagnostician (all "diagnosticians" were students) ratings increased significantly from before to after the "interpretation" had been received.

This group of experiments on personal validation suggests that, if astrology has no genuine validity of its own as an assessment device, but works rather through the medium of universally valid personality descriptions in this regard, then the following appears to be true: the acceptance of universally valid personality statements is a function of the person's belief that they are tailored specifically to him (Snyder, 1974); initial skepticism towards the use of astrology as an assessment device has virtually no relation to ultimate acceptance or rejection of ostensibly astrology-based universally valid personality statements (Rosen, 1975; and Snyder, Bloom, and Larsen, 1976); even skeptics are likely to have more faith than they previously had in astrology, and in the particular practitioner involved, after receiving universally valid statements seemingly based upon their birth data and reflecting their personality (Snyder, Bloom, and Larsen, 1976); and what is said about a person in the context of astrological "personality assessment" has the capacity to change that person's conceptualization of himself (Delaney and Woodyard, 1974).

But these studies just cited have not proven that the area of astrology dealing with personality description operates solely via personal validation of universally valid statements. They have, in fact, not settled anything, as far as the actual validity of astrology is concerned, although they demonstrate that astrologers cannot claim that astrology is valid simply because their clients affirm what they tell them about their personality. These studies have merely shown that generalized personality descriptions have a high probability of being accepted regardless of their ostensible source, and have posited a plausible explanation for how the personality-assessment area of astrology may work, assuming that astrology is invalid (i.e., assuming no connection between the positions of the planets and behavior on earth). Such an assumption is not yet warranted, as certain studies yet to be mentioned will indicate.

Astrological-type influences on inanimate processes. The research that has been included in this category is interesting because of the possibility that the astrological or quasi-astrological variables involved may affect living organisms, as well as inanimate processes. For example, some indirect although suggestive evidence that aspects formed by the planets may influence goings-on upon the earth was provided by Nelson (1952). He demonstrated convincingly that when any of the planets other than Uranus, Neptune, and Pluto formed angles with each other

of 90 and 180 degrees with the sun at the apex, shortwave radio transmission was severely impeded, whereas when these same planets formed 60 and 120 degree angles with each other (with the sun at the apex), short-wave radio transmission was predictably good and free of disturbance. Although Nelson's (1952) study was primarily concerned with how gravitational effects caused by planets at these angles to the sun influence sunspot activity (which in turn influences ionospheric radio-wave propagation), the similarity between what Nelson discovered about the effect of these angles with the sun at apex formed by these planets, and the effects upon the earth claimed by astrologers when planets form these same angles with the earth at the apex, is striking. The 90 and 180 degree angles formed by planets in relation to the earth constitute, respectively, the square and the opposition of astrology (see pp. 13-14 of this proposal). Astrologers have for a long time claimed that these planetary angles have detrimental effects upon events on the earth, whereas planetary angles of 60 and 120 degrees (the sextile and trine, in astrological terms) with the earth at the apex are supposed, according to astrologers, to have a benevolent, positive effect upon earthly events.

In the area of chemistry, Piccardi (1962), as cited by West and Toonder (1973), and Gauquelin (1966), performed an experiment which showed that the rate of precipitation of bismuth oxychloride (an inorganic compound) varied from

day to day over the seven-year period during which it was recorded, apparently as a result of certain astronomical phenomena. Variations in rate of precipitation were found to be contiguous with such short length phenomena as solar eruptions, cosmic ray bombardments of the earth, and powerful disturbances of the earth's magnetic field. Such variations in precipitation rate were also found to be contiguous with annual phenomena, such as the time of the year and the general activity of sunspots (which have a cycle slightly longer than a year). In addition, the reaction showed a variation according to the latitude at which it occurred, and was most pronounced between temperatures of 30 degrees and 40 degrees centigrade. It was concluded by Piccardi that these variations in precipitation rate were due to the effects of these various geophysical influences upon the molecular structure of water in some way. A clear implication of this line of research and reasoning is that geophysical influences (this term subsumes certain phenomena astrologers would consider astrological) may affect life on earth through the medium of water which comprises much of living tissue. In the case of human beings, more than 60 per cent of the body is comprised of water, at temperatures optimal for the occurrence of this effect discovered by Piccardi. If the validity of the astrological studies that have yielded significant findings bears up under continued empirical scrutiny, this finding of Piccardi's may provide the basis for explaining it.

The moon's influence upon behavior. Various researchers whose experiments fall in this category have reported significant findings.

It has been demonstrated that the moon has a direct influence on certain animals, possibly through the medium of its gravitational forces. Brown (1954) performed an experiment in which he transported oysters from their natural environment in New Haven, Connecticut to pans of seawater in a darkroom in Evanston, Illinois. He found that these oysters changed the rhythm of their shell-opening; from a rhythm previously attuned to the periods of high and low tide (the zenith and nadir, respectively, of the moon) of New Haven, they adjusted their shell-opening rhythms to a rhythm that would be appropriate were there tides in Evanston, Ill., i.e., to the zenith and nadir of the moon in relation to Evanston. Similarly, Brown and Terracine (1959), as cited by Gauquelin (1966/1970), showed that the peaks and decreases in the activity of rats were closely related to the position of the moon. The rats showed the greatest amount of activity when the moon was beneath the horizon, and the least activity when it was above the horizon.

For centuries it has been a part of folklore that the moon has some influence on mad people (hence the word "lunatic," in which the word in Latin for the moon, "luna," is found). However, some research by Chapman (1961) failed to lend support to this belief. He found no relation-

ship between the phases of the moon and the dates of admission for 3231 psychiatric patients, or between moon phases and on-ward assaultive behavior of psychotic patients. Moreover, no tendency was found for individual patients to be consistent as to the phase of the moon in which their assaultive incidents occurred.

Some evidence regarding the moon's effect upon human life has, however, emerged. Menaker (1967), in studying one-half million live births occurring in New York City between January, 1961, and December, 1963, found that there was a 1.01 percent greater number of births during the half-cycle of the moon commencing on the day after the first quarter than on the half cycle of the moon commencing on the day after the last quarter ($p < .01$). Gauquelin (1960), whose work will be discussed in somewhat greater detail further on, showed that writers and politicians were more likely to be born when the moon is rising (at the horizon) and when it is at zenith, as compared to other times, and that athletes and soldiers are less likely to be born when the moon is in these positions than at other times. Newmeyer and Anderson (1973) found that, among a population of 1107 heroin abusers in San Francisco, the moon was in the signs Virgo and Gemini significantly more often at the time of birth than could be accounted for by chance, and that the moon was in the sign of Capricorn at the time of birth significantly less often than would be accounted for by chance.

The sun sign's influence upon behavior. The sun sign, i.e., the astrological sign that the sun is in at a given time of the year, really represents changes in the earth's position as it orbits around the sun; to the pre-copernican minds that originated much of astrology, the fact that different stellar constellations were to be found at the point that the sun set at at different times of the year was an indication of changes in the sun's position, rather than changes in the earth's position relative to the sun. Some studies exploring the relationship of this "sun sign" variable to certain types of behavior have turned up significant findings.

A study conducted by Newmeyer and Anderson (1973) investigated whether heroin abusers at a detoxification clinic belonged more often than would be expected by chance or less often than would be expected by chance to one or another sun sign category (in the same study, they explored this possibility in relation to moon signs--see p. 29 of the present proposal. It was found that among the 1110 subjects involved, the sun sign Aquarius occurred significantly more frequently than in the general population, whereas the sun sign Scorpio occurred significantly less frequently than in the general population.

Cooper and Smithers (1973) seem to have discovered some significant relationships between what they have named "season of birth" and occupation. This "season of

birth" variable is very nearly identical to the astrological sun sign variable; Cooper and Smithers divide each of the seasons of the year into an early, middle, and late period, and each of these periods is a month long and begins around the 20th of the month. Thus, for example, the early spring period, which extends from March 21st to April 19th is almost identical (give or take a day or two, depending on the particular year) to what astrologers call sun sign Aries (i.e., the period of time that the sun is in Aries); likewise, the late autumn period, from November 21st to December 20th, corresponds to the astrological sun sign Sagittarius. By comparing expected frequencies of births in general for each of the three periods of each season of the year with observed frequencies of birth during these periods for various occupational groups, Cooper and Smithers found the following: that out of 10,000 army officers, significantly more than expected were born between the beginning of the mid-summer period and the end of the mid autumn period (encompassing the sun signs Leo, Virgo, Libra and Scorpio) and that significantly fewer were born during the middle and late spring (Taurus and Gemini) and during early and mid-winter (Capricorn and Aquarius); that out of 2303 artists, significantly more than expected were born during the spring (Aries, Taurus and Gemini), and that significantly fewer than expected were born between mid-summer and mid-autumn (Leo, Virgo, and Libra) and during late autumn (Sagittarius); and that out of 1618 musicians, significantly more than expected were born during

the winter (Capricorn, Aquarius, and Pisces), with fewer than expected being born between late summer and the end of the mid-autumn period (Virgo, Libra, Scorpio). Unfortunately, significance levels were not given for these data.

Two other studies on sun signs in which significant findings were obtained, by Pelligrini (1973), and by Mayo, White, and Eysenck (in press), will be discussed below under the heading of "Astrological studies directly related to the present study."


Other studies on the relationship between natal sun sign and certain types of behavior have not met with as much success in turning up significant relationships as those mentioned thus far. For example, Silverman (1971) performed two experiments along these lines, neither of which resulted in significant findings. In one of these experiments, 954 subjects indicated their date of birth and then used the Rokeach Value Survey to rank certain values according to their importance to them. Silverman hypothesized that if the assertions concerning personality made by sun-sign astrology are valid, then a group of subjects born under a given sun sign should rank the value most congruent with their ascribed personality characteristics above the median level significantly more often than would the rest of the subjects who were born under the other eleven signs. In no case did these comparisons reveal significant differences. In a second experiment that Silverman (1971) performed, he looked at a large number of

marriages and divorces in an attempt to discover whether patterns of compatibility or incompatibility of individuals born under different signs, as measured by how often they married and how often they divorced, followed the patterns predicted by two different astrologers. For example, one of the astrologers predicted that a couple comprised of one person born under sun sign Aries and one person born under sun sign Sagittarius would be more compatible than a couple in which one of the members was born under the sun sign Aries, with the other member born under the sun sign Cancer. Both astrologers came up with twelve especially compatible pairs of signs, and one of the astrologers suggested twelve especially incompatible pairs of signs, while the other suggested 18 incompatible pairs. Silverman tested for whether couples born under the compatible pairs of signs married each other significantly more frequently than would be expected, and for whether couples born under the incompatible pairs of signs divorced each other significantly more frequently than would be expected. No significant differences were found.

Barth and Benett (1974) did a study on sun signs employing data on 154,000 accessions into the U.S. Marine Corps. They posed the following hypotheses: 1) that the percentage of Marines born under sun signs Aries or Scorpio (two sun signs that supposedly imbue people born under them with a natural inclination towards soldiering) who reenlist at the termination of their first term of service is significantly greater than the post-first-term reenlist-

ment rate of Marines born under sun sign Libra (a sun sign that is supposed to predispose people born under it towards peace-lovingness and non-aggressiveness); 2) that the percentage of Marines born under sun signs Aries or Scorpio who enlist for more than two years service is significantly greater than the percentage of sun sign Libras who do so. In neither case were significant differences found.

Although too few studies concerning the relationship of natal sun signs to behavior have been performed to allow secure generalizations, it tentatively appears that the sun sign studies whose outcomes were non-significant tested specific predictions derived from traditional astrological assertions about the relationship of sun signs to personality. On the other hand, those sun sign studies whose findings were significant appear to have tested merely for the existence of a statistically significant relationship between some (unspecified) sun sign(s) and the behavior(s) in question. Thus, almost all of those sun sign studies with significant outcomes were open-ended as to the results they could accept ~~as~~ significant, and the results that they obtained would, for the most part, not have been successfully predicted by an astrologer. The one notable exception to this trend is the study by Mayo, White, and Eysenck (in press-discussed below) in which they reported significant results after having tested a prediction about the relationship of natal sun signs to the personality di-



mension of introversion-extraversion that was directly derived from traditional astrology.

Because these more open-ended studies have obtained significant results more often than the studies which set out to prove or disprove the validity of specific astrology-derived predictions about sun-sign-behavior relationships, the possibility is greater that the significant results obtained in these sun sign studies are merely spurious "false positives" (i.e., the apparent significance may be due merely to chance factors). In order to rule this possibility out, replications or approximate replications of the original studies ought to be done. In the present study, approximate replications of two sun sign studies which originally obtained significant findings (Pelligrini, 1973; and Mayo, White, and Eysenck, in press) will be performed.

Studies on other astrological influences and on combined astrological influences. The natal sun sign is only one variable among a number of others commonly taken into account by astrologers when they advise clients or make predictions, although it is the most widely known and most commercialized variable. Other astrological variables (such as the effects of the planets, the aspects the planets make, the houses the planets are in), believed by astrologers to play an important role in influencing life on earth have also been included in some studies investigating astrology. In most instances, such studies have

investigated the influences of these variables along with those of the sun signs, thus providing a better test of the validity of astrology than do studies on the influence of sun signs alone since they approximate more nearly the astronomical information and astrological procedures used by astrologers.

Gauquelin's well known study (1960, cited and discussed in Gauquelin, 1966/1970, and in West and Tonder, 1973), which examined the relationship between being a member of certain professions and being born at the rising or the zenith of certain planets, involved the birth data of 25,000 individuals from various countries in Europe. In addition to the findings concerning the moon described above (p. 29), Gauquelin's study found that: during the rise and zenith of Mars, scientists, doctors, athletes, soldiers and executives were born at a frequency significantly above average, whereas writers, painters, and musicians were born at a frequency significantly below average; during the rise and zenith of Jupiter, team athletes, soldiers, ministers, actors, journalists, and playwrights were born at a significantly above-average frequency, whereas solo athletes, scientists, and doctors were born at a significantly below-average frequency; during the rise and zenith of Saturn, scientists and doctors were born at a frequency significantly above average, whereas actors, painters, journalists and writers were born at a frequency significantly below average. This research of Gauquelin's does not lend

support to traditional astrology because when Gauquelin refers to the rising and culminating positions of certain planets, the positions he is referring to correspond fairly closely to what astrologers refer to as the twelfth house and the ninth house, respectively, of the horoscope. As Gauquelin (1969) has pointed out, these particular houses have virtually nothing to do with future career according to traditional astrology. (p. 225).

Two studies that obtained significant results, by Gauquelin, Gauquelin, and Eysenck (in press) and by Tiggle (1976), belong under this heading (i.e., "Studies on other astrological influences and on combined astrological influences"), but will be discussed instead under the heading "Astrological studies directly related to the present study".

A study examining the relationship of the sun sign, moon sign, and the sign associated with the first house (rising sign) to various personality traits for 130 subjects was performed by Silverman and Whitmer (1974). They rated the twelve astrological signs as to how much each symbolized each of several personality traits (aggressiveness, ambitiousness, creativeness, extrovertedness, intuitiveness, warmth, practicality, and adaptiveness), and each subject's natal sun, moon, and ascendant received, respectively, the ratings for the various personality traits of whatever sign it was in. For each personality trait, ratings for the sun sign, moon sign, ascendant, and

the average of the ratings for these three astrological variables were compared (correlated) with self-ratings and ratings by friends. In no case was a significant correlation found.

Marcharg (1975, as cited by Dissertation Abstracts International, 1976) also performed an experiment which failed to bear support for astrology. In her study, it was found that ten astrologers, working solely from the natal charts of 30 individuals of whom half were alcoholics, were unable to distinguish alcoholics from non-alcoholics at a frequency above chance levels.

Clearly, the results from some of these studies suggest that astrology may be partially valid, as was also suggested by the sun sign studies. Of course, the significant relationships of these studies too require replication, and the exploration of other, more parsimonious explanatory hypotheses before they can be viewed as genuinely "astrological" in nature. An approximate replication of one of the studies that belong under the present heading (by Mayo, White, and Eysenck, in press-see below) will be performed in the present study.

Astrological studies directly related to the present study. Three of the studies to be discussed under this heading (Pellegrini, 1973; Mayo, White, and Eysenck, in press; and Gauquelin, Gauquelin, and Eysenck, in press) are directly related inasmuch as the procedures in them which led to significant findings will be, in their essentials, replicated in the present study. The remaining

study to be discussed under this heading (Tiggle, 1976) served, to a certain extent, as a model for the two experiments to be performed in the present study which are not replications of previous experiments.

Pellegrini (1973) investigated whether differences between 288 individuals born under different sun signs would show up on the California Psychological Inventory. He performed 18 2(sex) X 12(sun sign) analyses of variance (i.e., one anova for each of the 18 scales of the CPI). The only significant finding to have withstood statistical scrutiny was the sun sign variable main effect of the anova for the Fe (femininity) scale of the CPI. It was found that individuals born in the first half of the year, from January 21 to July 23 (i.e., under the sun signs Aquarius, Pisces, Aries, Taurus, Gemini and Cancer) scored significantly higher than individuals born in the second half of the year, from July 4 to January 20 (under the signs Leo, Virgo, Libra, Scorpio, Sagittarius, and Capricorn). There were no significant differences in mean Fe scores between any of the sun signs within each of these half-year groupings; however, a significant difference was found whenever any sun sign mean from one half-year grouping was compared with any sun sign mean from the other half-year grouping.

A study dealing with the relationship between sun signs and behavior that appears to have born out a traditional astrological hypothesis was performed by Mayo, White, and Eysenck (in press). In this study, the Eysenck

Personality Inventory was administered to 907 males and 1407 females. The hypothesis derived from astrology that yielded significant results was that subjects born under "odd-numbered" sun signs (i.e., the signs of the fire and air trinities: Aries, Gemini, Leo, Libra, Sagittarius, Aquarius) would be more extraverted than subjects born under "even-numbered" sun signs (i.e., the signs of the earth and water trinities: Taurus, Cancer, Virgo, Scorpio, Capricorn, Pisces). An analysis of variance which compared mean scores on the extroversion scale of the EPI of subjects born under even-numbered signs versus subjects born under odd-numbered signs resulted in a significant difference. Also, it is worth noting that in this study, mean scores on the extroversion scale of the EPI for males and females combined showed the predicted pattern inasmuch as means for each of the odd-numbered signs were above the overall mean, whereas means for each of the even-numbered signs were below the overall mean (although in no case did this difference from the overall mean exceed even one standard deviation).

Gauquelin, Gauquelin and Eysenck (in press) performed a study examining the relationship between the personality dimensions of extroversion-intraversion, neuroticism-stability, and psychoticism-nonpsychoticism, and the positions of the planets Jupiter, Saturn, and Mars at the time of birth. Hypothesizing that the Gauquelin statistical relationship between planetary positions and professions (see

above, p. 36) results from the various planets in question influencing personality in some way, with personality then influencing which profession is chosen, they determined the position at birth of Mars, Saturn, and Jupiter for 2089 sports champions, 3647 scientists, and 1409 actors, and had independent raters rate (using biographical accounts) each of these individuals on the extroversion, neuroticism, and psychoticism dimensions. It was predicted and found that intraverbs are significantly more frequently born when Saturn is in the rising or upper culminating position, and that extroverts are significantly more frequently born when either Jupiter or Mars is in the rising or upper culminating position. No significant effects were found for the neuroticism-stability dimension, and only ambiguous effects were found for the psychoticism-nonpsychoticism dimension.

Tiggle (1976) attempted to validate an "astrological hostility scale" (the "scale" being a procedure for obtaining a score representing predisposition to act hostilely based solely on information found in the natal chart) by examining the correlation between scores on such a scale and scores derived from the Buss-Durkee Inventory (of hostility), for 72 subjects. Essentially, he reasoned that since Pluto and Mars are traditionally viewed by astrologers as planets which foster aggressive activity, and since Venus is viewed as a planet which fosters peaceful activities, then by estimating the influence on each sub-

ject of each of these planets and of certain combinations of them (by taking account of astrological variables found in the natal chart), one should be able to predict scores on an empirically based psychological test measuring the same trait. The only significant correlation to appear occurred when he attempted to correlate scores representing only the number and strength of the aspects of each planet with the Buss-Durkee Inventory scores; he obtained a low but significant correlation between the "aspect scores" for the planet Mars and the Buss-Durkee scale scores.

In any event, the logic behind the Tiggie (1976) study is basically the same as that employed in the two "original" (i.e., non-replication) experiments of the present study: take a personality trait which can be "assessed" using a variety of astrological variables and one or a number of psychological-empirical technique(s); structure the astrological "assessment" of the trait so that a summary number, representing how much and in what direction a given subject has the trait in question, can be obtained; and explore the validity of the astrological "assessment" of the personality trait in question by correlating it (or comparing it in some other way) with the psychological measurement of the same trait. This procedure essentially uses the psychological measurement of the trait as the criterion for accurate measurement, against which the astrological estimation of the trait is compared.

Hypotheses

The present study aims to explore the validity of astrology by testing its utility in "assessing" the personality dimensions of extroversion-intraversion and masculinity-femininity. Although five experiments in all are performed in the present study, only two basic approaches are in fact employed in an attempt to realize this goal: the creation of astrological "scales" (somewhat along the lines of Tiggie's astrological scale-see p. 41 above), one concerning extroversion-intraversion, the other concerning masculinity-femininity; and the replication of experiments that have indicated a significant relationship between certain astrological variables and these two personality dimensions.

Although the astrological "scales" to be employed in the present study differ from each other in the way they will be constructed, the manner in which they will be used to explore the validity of astrology as to the dimension of personality each one involves is essentially identical: a number will be derived indicating the strength and direction of the personality trait in question based upon astrological variables; this number will be compared with the score from the corresponding psychological test(s), which will be taken as the criterion for valid measurement of the particular personality dimension. The overall hypothesis for these "astrological scale" experiments is that, if the use of astrological variables and techniques results in an accurate and valid assessment of the per-

sonality dimension in question, then a statistically significant relationship should exist between the astrological measurement of the personality dimension in question and the corresponding psychological measurement. Specifically, if astrological variables give a valid assessment of the personality dimensions in question, then the following relationships will be found:

- 1) Scores from ~~extroversion~~-introversion astrological "scales" will be found to be significantly related to scores from the extroversion-introversion scale of the Eysenck Personality Inventory.
- 2) Scores from the masculinity-femininity astrological "scale" will show a significant relationship with scores from the Fe scale of the California Personality Inventory and/or with scores from the Bem Sex-Role Inventory.

Replications of those experiments on astrology which have seemingly emerged with significant results are necessary at this stage of astrological research in order to get a better idea of the reliability of the findings in question. Obviously, the problem of explaining such findings disappears if they turn out to have been due to chance, or are non-replicable for some other reason. On the other hand, if these significant findings reappear when the essential conditions and procedures which produced them originally are replicated, their status as findings in need

of explanations (not necessarily astrological ones, although that is a distinct possibility) would be strengthened. With this reasoning in mind, three experiments which originally found significant relationships between astrological variables and behavior (Pellegrini, 1973; Mayo, White, and Eysenck, in press; and Gauquelin, Gauquelin and Eysenck, in press-see above, pp. 39-41) will be replicated in their essential features in the present study. Specifically, if the significant findings in these studies were due to non-chance factors, then when each of these experiments is replicated, the following outcomes should result:

1) Gauquelin, Gauquelin and Eysenck (in press)

a) Intraverts will be found to have been born significantly more frequently when Saturn had just risen or had just passed its upper culmination;

b) Extroverts will be found to have been born significantly more frequently when Mars and/or Jupiter had just risen or had just passed their/its upper culmination.

2) Mayo, White, and Eysenck (in press)

a) Subjects born under odd-numbered sun signs (Aries, Gemini, Leo, Libra, Sagittarius, Aquarius) will be found to be more extroverted than subjects born under even-numbered sun signs (Taurus, Cancer, Virgo, Scorpio, Capricorn, Pisces).

3)Pellegrini (1973)

- a)Subjects born in the first half of the year (January 21 to July 3) will, for both sexes, be found to score in a more feminine direction on measures of masculinity-femininity than do subjects born in the second half of the year (from July 4 to January 20);
- b)When subjects are grouped according to sun signs, and the mean scores for the various sun signs derived, no significant differences will be found between any of the sun signs within each of the half-year groupings;
- c)A significant difference will be found whenever any sun sign mean from one half-year grouping is compared with any sun sign mean from the other half-year grouping.

CHAPTER II

METHODOLOGY & RESULTS

General information concerning subjects

All subjects were students who were taking an introductory course in psychology at the University of Windsor during the year 1978-79. In all, 234 students provided data that were used in at least one or more of the data analyses (which I shall frequently refer to as "experiments") of this study. All of these subjects provided the date-of-birth information necessary for determining natal sun sign. Of these subjects, 135 provided hour-of-birth and location-of-birth information with sufficient accuracy as to enable the computation of their horoscope.

Originally, 242 subjects participated in this study, but the data from eight subjects had to be excluded from statistical analyses. For three of these subjects, the natal sun sign could not be determined, since their date of birth fell on a day of the month that the astrological sign of the sun changed (as it does around the 21st of every month), and they did not provide the hour of birth information which would have enabled computation of the sun sign. The data

from the other five subjects was not included because they fell into the "other" ethnic category (comprised of subjects of relatively unusual ethnic background for which there was only one representative in this sample). These subjects were found to score significantly higher on one of the scales employed in this study (the extroversion scale of the Eysenck Personality Inventory) than the subjects in the remaining ethnic categories, and it was decided that it would be safest to exclude their data altogether from the analyses.

General procedures

All students taking introductory psychology were invited to participate in the present study by way of a printed announcement that was distributed to each of them by the instructor of each class. This announcement stated the (astrological) nature of the study, and requested that students attempt to obtain their exact time of birth before participating as subjects (see Appendix A). When they subsequently reported for the experiment, they were given a packet of four questionnaires to fill out (see Appendix B). Three of these questionnaires were psychological measures--the Fe scale of the California Psychological Inventory, the Bem Sex-Role Inventory, and the extroversion scale of the Eysenck Personality Inventory. The remaining ques-

tionnaire requested certain demographic information (some of which was used to test whether the various ethnic groups that comprised this sample respond similarly on the personality measures involved), information necessary for casting the subject's horoscope or ascertaining his sun sign, and information about his previous experience with and knowledge of astrology.

EXPERIMENT #1

An attempted validation of astrological "scales" of extroversion-intraversion.

Hypothesis: Scores from extroversion-intraversion astrological "scales" will be found to be significantly related to scores from the extroversion-intraversion scale of the Eysenck Personality Inventory.

Subjects

Subjects for experiment #1 consisted of the 135 students mentioned above (see p. 47) who provided the information necessary for calculating their horoscopes. This subsample was comprised of 39 males and 96 females who ranged in age from 18 to 54 ($\bar{X}=22.4$, $SD=6.9$)

Materials

Extroversion scale of the EPI. The extroversion

scale of the Eysenck Personality Inventory is a widely used measure of the personality dimension of extroversion-intraversion of adequate reliability and validity. Eysenck and Eysenck (1968) report test-retest reliabilities in the .80's after approximately one year had elapsed between testings. Among the studies that support its validity is one by Vingoe (1966), who found that self-ratings of extroversion-intraversion were significantly related to scores on the extroversion scale of the EPI. Moreover, Eysenck (1964) found that when judges nominated intraverted and extroverted subjects, these subjects generally had scores on the extroversion scale of the EPI in the direction of the group to which they were nominated.

Astrological "scales" of extroversion-intraversion.

Five astrology-based measures of extroversion-intraversion were employed here. Their names and corresponding abbreviations were:

- 1) The astrological measure of extroversion-intraversion based on student ratings
(abbr.: Ast/EI-Stu).
- 2) The astrological measure of extroversion-intraversion based on ratings by astrologer L.H. (abbr.: Ast/EI-LH).
- 3) The astrological measure of extroversion-intraversion based on ratings by astrologer

D.H. (abbr.: Ast/EI-DH)..

4) The astrological measure of extroversion-intraversion based on ratings of astrologer J.S. (abbr.: Ast/EI-JS).

5) The astrological measure of extroversion-intraversion based on overall (composite) astrologer ratings (abbr.: Ast/EI-Ov.).

Each of these astrological measures consisted of ratings of 203 astrological influences as to the degree to which each influence supposedly induces intraversion or extroversion when it occurs at the moment of an individual's birth (i.e., when it is part of his/her natal chart). Three types of astrological influence were rated: the differential effects of the different planets, the sun and the moon upon extroversion-intraversion when in the various astrological houses; the differential effects of the planets/sun/moon when in the various astrological signs; and the astrological influences supposedly resulting from certain angles created by the positions of the planets/sun/moon (aspects).

All of these astrological measures of extroversion had the same origin. A thorough search of a popular and comprehensive text on astrology, The Astrologer's Handbook by Sakoian and Acker (1973), was made by the experimenter in order to glean those astrological influences that are supposed to affect ex-

troversion. Using as wide a criterion for inclusion as possible, each such (potential) influence was listed, along with a summary of the ideas that accompanied it relating to extroversion-intraversion.

The astrological measure of extroversion-intraversion based on student ratings (Ast/EI-Stu.) was constructed according to the following procedures. A list of these summarized ideas (in the form of statements about a hypothetical individual) was given to each of ten graduate students in psychology, whose task it was to rate each statement or set of statements as to the degree of extroversion or introversion it/they expressed. Essentially, these students were rating the degree of extroversion or introversion supposed resulting from various astrological influences by rating statements indicative of that influence made by Sakoian and Acker (1973). There were 203 statements or statement sets that were rated by these students (as shown in Appendix C), and the corresponding astrological influence involved can be found by referring to the same-numbered horoscope constituent in Appendix D. The raters were encouraged to give primacy to Eysenck's definition of extroversion-intraversion while rating, but were also requested to consider other definitions of that personality dimension if applicable (see instructions to raters in Appendix C). A 7-point rating scale was used, which ranged from +3 (extreme extrover-

sion) to -3 (extreme intraversion), with a zero midpoint. The 10 sets of (203) ratings were distilled into a single "measure" by averaging the 10 ratings for each statement or statement set. However, only in those cases in which at least 70% of the raters agreed about direction of the statement(s) (i.e., whether it expressed intraversion or extroversion) and that the statement(s) deserved a non-zero rating (i.e., agreed that it was not neutral as to extroversion-intraversion) was the corresponding astrological "influence" included in the "scale". Otherwise, the value assigned to the astrological influence corresponding to the statement or statement set was zero.

The astrological measures of extroversion-intraversion based the ratings of astrologers L.H., D.H., and J.S. (respectively, Ast/EI-LH, Ast/EI-DH, and Ast/EI-JS) were obtained in the following way. Each of these astrologers rated each of the 203 astrological influences that were taken from Sakoian and Acker (1973) directly (rather than indirectly through statements, as was the case with the graduate students) as to the degree to which each would predispose an individual to be extroverted or introverted were it to occur in his natal chart. Each astrologer's series of ratings was employed as a measure of extroversion-intraversion in unaltered form. Appendix D shows the instructions to the astrologers and

the material they rated.

The astrological measure of extroversion-intraversion based on the composite or overall ratings of the three astrologers (Ast/EI-Ov.) was derived according to the following procedures. When there was not unanimous agreement among astrologers as to the direction that a particular astrological influence predisposed to (extroversion or intraversion, represented respectively by arithmetically positive or negative ratings), it was given an overall rating of zero. When two out of the three astrologers rated a given astrological influence as zero, its overall rating was also zero. When two of the astrologers agreed on rating an astrological influence in either an extroverted or introverted (positive or negative) direction and the third rated it zero, the two non-zero ratings were averaged for the overall rating (this was done because I neglected to provide the astrologers with a clear means of indicating "I don't know what effect this astrological influence has on extroversion"-a zero rating could mean either this, or could mean "this astrological influence has no significance for extroversion-intraversion"). When all astrologers agreed about the direction of an astrological influence (extroversion or intraversion), their ratings were simply averaged for an overall rating.

Appendix E shows the ratings for all five of these astrological measures of extroversion-intraversion.

These ratings were employed in the following way. Each subject's horoscope was searched via computer for any astrological influences that had non-zero ratings in any one of these five astrological measures. For each of these measures, the ratings were simply summed, and this became the individual's extroversion score for that measure. Thus, for each individual, five different astrological scores concerning extroversion were obtained.

The five sets of ratings which comprised these five astrological "measures" of extroversion-intraversion were rather highly correlated with each other. The correlation between the ratings for Ast/EI-Stu. (the astrological measure of extroversion-intraversion based on student ratings) and the ratings for Ast/EI-Ov. (the astrological measure of extroversion-intraversion based on overall astrologer ratings) was $r=+.73$. The correlations between the ratings of the individual astrologers ranged from $r=+.66$ to $r=+.71$.

Results, experiment #1

Table 1a shows Pearson product-moment intercorrelations for all variables (both astrological and psychological) used in this study, and Table 1b explains the abbreviations for variables used in Table 1a. As Table 1a indicates, none of the astrological measures of extroversion of experiment #1 were significantly correlated

Table 1a
Intercorrelations for all variables

Variables*	Ast/EI-Stu	1	2	3	4	5	6	7	8	9	10	11
1) Ast/EI-Ov	.76 ^c											
2) Ast/EI-LH	.71 ^c	.85 ^c										
3) Ast/EI-DH	.69 ^c	.78 ^c	.63 ^a									
4) Ast/EI-JS	.60 ^c	.88 ^c	.57 ^c	.63 ^c								
5) Ast/EI-HEMI	-.03	-.03	-.06	-.11 ^a	.01							
6) H.Pos/Se-Ma, Ju	-.26 ^b	-.15	-.13	-.18 ^a	-.11	.14						
7) Odd-even	-.17 ^a	-.29 ^c	-.08	-.36 ^e	-.33 ^c	.05	-.03					
8) Ast/MF	-.39 ^c	-.34 ^c	-.28 ^c	-.43 ^c	-.27 ^b	.04	.20 ^a	.38 ^c				
9) Half-year	-.14	.00	.03	-.09	-.06	-.14	-.06	-.08	-.02			
10) extro/EPI	.08	.05	.03	-.04	.07	-.03	-.03	-.09	.04	.01		
11) Fe/CPI	.05	-.04	-.09	-.03	.01	.01	.02	.05	.06	-.16 ^a	-.14 ^a	
12) BSRI	.01	.07	.06	-.04	.07	.04	.00	.00	.09	-.03	-.22 ^b	.49 ^c

*See Table 1b (next page) for the meaning of the variable abbreviations used in this table, and for the α for each variable.

^a $p < .05$

^b $p < .01$

^c $p < .001$

Table 1b

Meanings of variable abbreviations

Abbreviation	Meaning
Ast/EI-Stu	The astrological measure of extroversion-intraversion of experiment #1 based on student ratings of 203 statement sets (n=135).
Ast/EI-Ov	The astrological measure of extroversion-intraversion of experiment #1 based on composite (overall) astrologers' ratings of 203 astrological influences (n=135).
Ast/EI-LH Ast/EI-DH Ast/EI-JS	The three astrological measures of extroversion-intraversion of experiment #1 based on the ratings of each of the astrologers of the 203 astrological influences (n=135).
Ast/EI-HEMI	3-level astrological extroversion variable of "Other data analyses" based on horoscope-hemisphere predominance (n=135).
H.Pos/Sa-Ma, Ju	3-level astrological extroversion variable of experiment #3 based on diurnal positions of Saturn, Jupiter and Mars (n=128).
Odd-even	2-level astrological extroversion variable of experiment #4 involving odd-numbered versus even-numbered sun signs (n=234).
Ast/MF	The astrological measure of masculinity-femininity of experiment #2 (n=135).
Half-year	2-level astrological masculinity-femininity variable of experiment #5 involving sun signs of the 1 st half versus the 2 nd half of the year (n=234).
extro/EPI	The extroversion scale of the Eysenck Personality Inventory. (n=234).
Fe/CPI	The femininity scale of the California Psychological Inventory (n=234).
BSRI	Androgyny scores from the Bem Sex-Role Inventory (n=233).

with extroversion scores from the Eysenck Personality Inventory (see the first five columns of row 10). However, the first four rows of Table 1a indicate that all five astrological measures of extroversion were significantly correlated with each other.

EXPERIMENT #2

An attempted validation of an astrological "scale" of masculinity-femininity.

Hypothesis: Scores from the masculinity-femininity astrological "scale" will show a significant relationship with scores from the Fe scale of the California Psychological Inventory and/or with scores from the Bem Sex-Role Inventory.

Subjects

The data for this experiment came from the same 135 subjects who contributed data for experiment #1 (see p. 49 above).

Materials

The Fe scale of the California Psychological Inventory.

The Fe scale of the CPI consists of 38 statements to which the subjects must respond either "true" or "false". Higher scores are indicative of greater femininity, lower scores of greater masculinity. Megargee's (1972)

book on the CPI cites research indicating the test-retest reliability of the Fe scale to be in the low .70's. As concerns its validity, Megargee points out that the Fe scale has demonstrated its ability to discriminate males from females in a consistent fashion, and that it correlates to a low but significant degree with a number of other well known scales of masculinity-femininity, such as the M-F scale of the MMPI, and the Guilford-Martin M-F scale.

The Bem Sex-Role Inventory. Constantinople (1973) pointed out that implicit in the construction and scoring system of the Fe scale of the CPI is the assumption that the personality dimension of masculinity-femininity is a bipolar dimension, with the extremes of masculinity and femininity at the respective poles, and the related assumption that as masculinity increases, femininity must decrease (and visa versa). In contrast, the Bem Sex-Role Inventory (BSRI) was created with some rather different assumptions in mind concerning the personality dimension of masculinity-femininity. As Bem (1974) put it, "the dimensions of masculinity and femininity are empirically as well as logically independent" (p. 155). Unlike the Fe scale, the values that the masculinity and femininity portions of this inventory can take are independent of each other. The BSRI is com-

posed of 20 masculine adjective, 20 feminine adjectives, and 20 neutral adjectives (which serve as a social desirability scale), and the subject's task is to rate each of these adjectives on a 7-point scale as to how well it describes him. Four separate scores are derivable—a masculinity score, a femininity score, a social desirability score, and most importantly, an androgyny score. This androgyny score is determined by a t-test for the difference between the subject's masculine and feminine self-ratings (non-significant differences represent androgyny, while significant differences indicate sex-role typing).

In examining BSRI scores from two separate samples of subjects, Bem (1974) found no significant correlation between scores on the masculinity and femininity portions of this measure, demonstrating that the dimensions of masculinity and femininity are empirically independent.

Short term test-retest reliability for the BSRI was found to be .90 for the masculinity score, .90 for the femininity score, and .93 for the androgyny score (Bem, 1974). The validity of the BSRI was supported by its moderate correlations with the Fe scale of the CPI: the BSRI masculinity score correlated $-.42$ with Fe scale scores for males and $-.25$ for females; the BSRI femininity score correlated $.27$ with the Fe scale for males and $.25$ for females; and the BSRI androgyny score cor-

related .50 with the Fe scale for males, and .30 for females. Bem suggests that these relatively low correlations indicate that the BSRI measures an aspect of sex roles not directly measured by the Fe scale.

The astrological "scale" of masculinity-femininity.

This astrology-based measure of masculinity-femininity was constructed in the following way. On the basis of readings on astrology and discussions with astrologers, I devised, as a first step, a tentative astrological "scale" of masculinity-femininity with the following objectives in mind: 1)utilization of as much relevant information from the natal chart as possible; 2)conformity with the beliefs and assertions of traditional astrology; and, 3)ease of actual use in determining a given subject's position on the masculinity-femininity dimension. In order to insure that the first two of these objectives were met, copies of this initial attempt at an astrological measure of masculinity-femininity were sent to three individuals who had studied astrology intensively, each of whom gave feedback on the "scale" and made suggestions as to how it could be improved. These comments were then incorporated into the final version (see Table 2). Essentially, this measure is a point system for measuring, for a given natal chart, the relative strength of the influence upon behavior exerted by planetary positions and other astro-

Table 2

The astrological "scale" of masculinity-
femininity

Astrological "influence"	In "male" signs	In "female" signs
Sun	-7	+7
Moon	-7	+7
Mercury	-3	+3
Venus	-3	+5
Mars	-5	+3
Jupiter	-5	+5
Saturn	-5	+5
Uranus	-3	+3
Neptune	-3	+3
Pluto	-3	+3
Ascendant	-6	+6
M.C. (10 th house)	-5	+5
Ascendant ruler	-3	+3
Sun sign ruler	-3	+3
Each aspect with luminary	-1.5	+1.5
Each aspect with Venus, or Mars, or Jupiter, or Saturn, or Mercury	-1	+1
Each aspect to Uranus, or Neptune, or Pluto	-0.5	+0.5
Orb within 3 degrees	-1	+1

logical influences in what astrologers have traditionally considered "female" signs (i.e., the even numbered signs: Taurus, Cancer, Virgo, Scorpio, Capricorn, Pisces) against the effect upon behavior of astrological influences in the "male" or odd-numbered signs (Aries, Gemini, Leo, Libra, Sagittarius, Aquarius). Each subject's horoscope was searched for the various astrological influences of this measure, and when any were found, the correct number of points was awarded. The points for the astrological influences in "female" signs (all of which were positive values) were summed with the points for astrological influences in the "male" signs (all of which were negative values). If the resulting sum were negative, it would indicate predominantly masculine behavior, while a positive sum would signify a predisposition to feminine behavior (with the absolute magnitude of the sum indicating the magnitude of sex-role typing).

Although this astrology-based measure of masculinity-femininity can readily be applied to a given natal chart, the rationale behind certain features of the scoring system may not be immediately evident. For one thing, this measure incorporates the astrological belief that some astrological influences (e.g., the sun, the moon, the ascendant) have a generally more powerful effect upon be-

havior than do others (e.g., the planets Neptune, Uranus, and Pluto) by assigning a greater number of points to the former influences. It also incorporates the idea that the planets Mars and Venus, which are supposed to influence behavior in directions which are, respectively, stereotypically masculine and feminine (see p. 10 above), will have a greater amount of influence (and thus should receive more points) when in signs that are congruent with the sex-typed qualities of their respective influences.

Results, experiment #2

In Table 1a on page 56 above, the correlations between the astrological "scale" of masculinity-femininity (abbreviated "Ast/MF" in Table 1a) and the two psychological measures of masculinity-femininity are shown at the points where column 9 (labeled "8") and rows 11 and 12 intersect. Neither correlation was statistically significant.

The correlation of .49 between scores from the Fe scale of the California Psychological Inventory and androgyny scores from the Bem Sex-Role Inventory shown in Table 1a accords with the correlations obtained by Bem (1974) for the same measures (see p. 59 above). Table 1a also shows that both the CPI Fe scale and androgyny scores from the BSRI were negatively correlated to a low but significant extent with extroversion scores from the Eysenck Personality Inventory.

EXPERIMENT #3

Attempted confirmation of the findings of Gauquelin, Gauquelin & Eysenck (in press) concerning the relationship of the diurnal positions at birth of Saturn, Mars and Jupiter to the personality dimension of extroversion-intraversion.

Hypotheses: (derived from hypotheses 1a and 1b on p. 45 above) Subjects born with Saturn in rising or upper culminating position (9th and 12th astrological houses) will be found to be more introverted than subjects born with either Mars or Jupiter in rising or upper culminating position. Also, subjects born with Saturn, Mars and Jupiter in positions other than the 9th and 12th houses will be more extroverted than the above predicted introverts, and will be less extroverted than the above predicted extroverts.

Subjects

Of the 135 subjects who provided adequate information for the calculation of their horoscopes, only the data from 128 of them were employed in experiment #3. Data from the remaining seven were excluded because in

their cases, both Saturn and Mars or Saturn and Jupiter were in the 9th and/or 12th astrological houses at birth. By excluding their data, a more valid test of the differential effects upon extroversion of Saturn versus Mars and Jupiter when in similar astrological positions was possible.

Materials

The extroversion scale of the Eysenck Personality Inventory was used as the psychological measure of extroversion-intraversion.

Results, experiment #3

Table 3a shows the results of a 1-way analysis of variance on mean extroversion scores of the three groups involved (Saturn-9th or 12th house, Mars/Jupiter-9th or 12th house, Saturn/Mars/Jupiter-other house positions; the name for this variable is H.Pos/Sa-Ma,Ju). As Table 3a indicates, the three groups did not differ significantly with regard to mean extroversion score. Table 3b shows the means for each of the planet-position categories involved. Clearly, the magnitudes of these means do not show the pattern predicted by the hypotheses of this experiment.

EXPERIMENT #4

Attempted confirmation of the findings obtained by Mayo, White & Eysenck (in press)

Table 3a

One-way analysis of variance on extroversion scores for the astrological classification variable "H.Pos/Sa-Ma,Ju" (this variable is defined in Table 3b below).

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
H.Pos/Sa/Ma-Ju	2	20.50	10.25	.69	.50
Error	125	1876.22	14.85		

Table 3b

Mean extroversion scores of the groups (classification conditions) comprising the "H.Pos/Sa-Ma,Ju" variable.

<u>Positions</u>	<u>M</u>	<u>SD</u>	<u>n</u>
Mars and/or Jupiter, in 9th and/or 12th house	14.00	3.48	35
Saturn, in 9th or 12th house	15.00	4.00	11
Mars, Jupiter and Saturn in other astrological houses.	13.60	3.98	82

concerning the relationship between natal sunsign and extroversion.

Hypothesis: Subjects born under odd-numbered sun signs (Aries, Gemini, Leo, Libra, Sagittarius, Aquarius) will be found to be more extroverted than subjects born under even-numbered sun signs (Taurus, Cancer, Virgo, Scorpio, Capricorn, Pisces).

Subjects

The data from all 234 subjects who provided the date-of-birth information necessary for the determination of their natal sun sign were employed in experiment #4. This sample consisted of 66 males and 168 females ranging in age from 18 to 54 (mean age=22.7, SD=6.98). The subjects whose data were employed in experiments #1-3 comprised part of this sample.

Materials

The psychological measure of extroversion used in experiment #4 was the extroversion scale of the Eysenck Personality Inventory.

Results, experiment #4

Table 4a shows the results of a 3-factor analysis of variance which nested the various sun signs in a two-level "odd-even" variable, according to whether they were among the odd-numbered sun signs or the even-numbered

Table 4a
3-factor analysis of variance of sun sign
and sex on extroversion scores, with sun
sign nested within "odd-even" (odd sun
signs versus even sun signs).^a

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Odd-even	1	17.11	17.11	1.19	ns
Sex	1	1.54	1.54	.11	ns
Odd-even*Sex	1	2.07	2.07	.14	ns
Sun sign(Odd-even) ^b	10	132.12	13.21	.92	ns
Sun sign*Sex(Odd-even)	10	72.62	7.26	.51	ns
Error	210	3017.08	14.37		

^aThis analysis of variance was performed by computer, using the General Linear Models procedure of the Statistical Analysis System (See SAS User's Guide, 1979, put out by the SAS Institute of Raleigh, North Carolina).

^bThe variance between sun signs within each of the Odd-even groupings was also analyzed; no significant variation was found.

sun signs. In addition to enabling comparison of the odd-numbered sun signs taken together versus the even-numbered sun signs taken together, this nested analysis of variance made possible a comparison of (mean extroversion scores of) the sun signs with each other, within each "odd-even" level. Sex of subjects was employed as one of the main effects, and the interaction between sex and the other variables was explored. As Table 4a indicates, no significant findings emerged from this analysis, either between sun signs, or between odd versus even groupings of the sun signs. Moreover, no interaction with sex of subject was found for any of the astrological (sun sign) variables used here.

Table 4b shows the means and standard deviations for the odd versus the even sun signs, for males, females, and for both sexes combined. In addition to expressing in a different format the lack of significant variation in this data (all of the means are roughly within 1 SD of each other), it is also clear from Table 4b that the striking pattern of mean extroversion scores found by Mayo, White & Eysenck, in which the combined (male and female) means for each of the odd-numbered sun signs were uniformly higher than the grand mean, and the means for the even-numbered signs uniformly lower, did not occur in these data.

Table 4b
Means and standard deviations on ex-
troversion scores by sex and sun sign.*

Odd-numbered Sun signs	<u>Males</u>			<u>Females</u>			<u>Combined</u>		
	M	SD	n	M	SD	n	M	SD	n
Aries(1)	15.8	3.2	4	14.2	3.3	9	14.7	3.2	13
Gemini(3)	15.3	2.3	6	16.7	4.6	12	16.2	4.0	18
Leo(5)	13.8	5.7	5	13.4	4.2	9	13.6	4.6	14
Libra(7)	13.2	3.5	5	13.4	4.2	9	13.4	3.8	14
Sagittarius(9)	15.3	2.8	10	15.4	3.1	13	15.4	2.9	23
Aquarius(11)	13.3	1.7	4	13.3	3.7	14	13.3	3.3	18
<u>Even-numbered Sun signs</u>									
Taurus(2)	12.7	3.3	6	14.7	3.5	17	14.1	3.5	23
Cancer(4)	14.6	4.0	5	14.5	3.4	23	14.5	3.4	28
Virgo(6)	13.8	3.3	10	15.1	4.6	14	14.5	4.1	24
Scorpio(8)	11.7	5.6	3	14.1	4.2	14	13.7	4.3	17
Capricorn(10)	14.3	2.1	3	13.5	2.2	13	13.7	2.2	16
Pisces(12)	14.4	2.7	5	12.1	5.0	21	12.6	4.7	26
GRAND MEAN=14.15									

*the sun sign numbering is based on the order in which the sun sign occurs during the year, with Aries (the Vernal Equinox) as the starting point.

EXPERIMENT #5

Attempted confirmation of the findings obtained by Pellegrini (1973) concern the relationship between the personality dimension of masculinity-femininity and natal sun signs.

Hypothesis: Subjects born under the sun signs of the first half of the year (Aquarius, Pisces, Aries, Taurus, Gemini, Cancer) will, for both sexes, score in a more "feminine" direction on masculinity-femininity measures than subjects born under the sun signs of the second half of the year (Leo, Virgo, Libra, Scorpio, Sagittarius, Capricorn); no significant differences will be found between sun signs within each half-year grouping; a significant difference will be found whenever any sun sign mean from one half-year grouping is compared with any sun sign mean from the other half year grouping.

Subjects

As was the case in experiment #4, the data from all 234 subjects who provided the necessary date-of-birth information for determination of their natal sun sign were employed in experiment #5. (see p. 66 above for more information on these subjects). However, only the data

from 233 subjects were used in the analyses of experiment #5 involving the Bem Sex-Role Inventory-for one subject, data for the BSRI was missing.

Materials

The psychological measures employed in experiment #5 consisted of the Fe scale of the California Psychological Inventory, and the Bem Sex-Role Inventory.

Results, experiment #5

Table 5a shows an analysis of variance on Fe scale (of the CPI) scores in which the various sun signs were nested within a 2-level variable ("half-year"), depending on whether they occur in the first half or the second half of the year. Sex of subject was the third variable of this analysis, whose main effects and interactions with the other two variables were examined. As indicated by Table 5a, there was no significant difference in Fe scale scores between the two half-year groupings of sun signs, and no significant differences in Fe scale scores between the sun signs within each half-year grouping. Moreover, there was no interaction between half-year grouping and sex, or between the various sun signs within each half-year grouping and sex. The only significant finding was for the main effect on sex of subject.

Table 1a (page 56 above) shows a low but significant correlation of $r = -.16$ ($p < .05$) between half-year sun

Table 5a

3-factor analysis of variance of sun sign and sex on Fe scale scores, with sun sign nested within half-year.^a

Source	df	SS	MS	F	p
Half-year	1	9.13	9.13	0.85	ns
Sex	1	1324.32	1324.32	122.68	.0001
Half-year*Sex	1	3.30	3.30	0.31	ns
Sun sign(Half-year) ^b	10	129.26	12.92	1.20	ns
Sun sign*Sex(Half-year)	10	44.36	4.43	.41	ns
Error	210	2266.97	10.80		

Table 5b

3-factor analysis of variance of sun sign and sex on BSRI androgyny scores, with sun sign nested within half-year.^a

Source	df	SS	MS	F	p
Half-year	1	0.29	0.29	1.03	ns
Sex	1	13.44	13.44	47.42	.0001
Half-year*Sex	1	0.38	0.38	1.36	ns
Sun sign(Half-year) ^b	10	3.47	0.35	1.22	ns
Sun sign*Sex(Half-year)	10	1.70	0.17	0.60	ns
Error	209	59.24	0.28		

^aThe analyses of variance of Tables 5a and 5b were performed by computer, using the GLM procedure of the Statistical Analysis System.

^bFor both Tables 5a and 5b, the variance between sun signs within each of the half-year groupings was also analyzed; no significant variation was found.

sign groupings and scores on the Fe scale of the CPI. The contradiction between this significant correlation and the information regarding "half-year" in Table 1a is more apparent than real. The significant correlation of $-.16$ represents the relationship between Fe scale scores and half-year sun sign groupings before the variance from the other (main and interaction) effects of Table 5a have been "partialled out". Table 5a, on the other hand, indicates that once the variance from these other effects is excluded, the relationship between "half-year" and Fe scale scores disappears.

Table 5b shows a nested analysis of variance on Bem Sex-Role Inventory Androgyny scores that examines the same main effects and interactions as those examined by the analysis of variance on Fe scale scores of Table 5a. The pattern of findings here was identical to those of Table 5a—that is to say, only the main effect for sex was significant, with no other significant main effects or interactions.

Tables 5c and 5d show, respectively, the mean scores of the Fe scale of the CPI and the BSRI (androgyny scores), broken down by sun sign and sex, and arranged in order starting from the beginning of the year. In both tables, females score consistently higher than males. It is also worth noting that there exists no consistent pattern with regard to highest or lowest mean

Table 5c

Means and standard deviations on
Fe scale scores, by sex and sun sign.
(sun signs arranged by half-year
grouping).*

Sun signs, 1 st half of year	Males		Females		Combined	
	M	SD	M	SD	M	SD
Aquarius	16.8(4)	4.0	24.5(14)	2.6	22.8(18)	4.4
Pisces	17.8(5)	2.2	23.2(21)	3.2	22.2(26)	3.7
Aries	17.0(4)	2.7	22.8(9)	2.7	21.0(13)	3.8
Taurus	17.7(6)	5.1	24.2(17)	3.4	22.5(23)	4.8
Gemini	19.0(6)	3.0	23.6(12)	3.0	22.1(18)	3.7
Cancer	17.8(5)	2.6	23.1(23)	2.6	22.1(28)	3.3
Sun signs, 2 nd half of year						
Leo	17.2(5)	3.5	22.6(9)	3.0	20.7(14)	4.0
Virgo	16.5(10)	2.6	23.6(14)	3.8	20.6(24)	4.8
Libra	20.0(5)	3.8	24.9(9)	3.0	23.1(14)	4.0
Scorpio	17.3(3)	2.9	23.0(14)	3.1	22.0(17)	3.7
Sagittarius	16.2(10)	3.9	21.3(13)	4.6	19.1(23)	4.9
Capricorn	17.7(3)	5.9	21.6(13)	3.0	20.9(16)	3.8

*numbers in parentheses represent n.

Table 5d
Means and standard deviations on
BSRI androgyny scores, by sex and
sun sign (sun signs arranged by
half-year grouping).

Sun signs, 1st half of year	Males		Females		Combined	
	M	SD	M	SD	M	SD
Aquarius	-.4812	.648	.4122	.457	.2136	.616
Pisces	-.3112	.279	.3155	.677	.1949	.665
Aries	-.4682	.361	.1967	.589	-.0078	.605
Taurus	.1774	.712	.5698	.473	.4674	.556
Gemini	-.2846	.479	.3879	.582	.1637	.627
Cancer	-.4080	.834	.3168	.471	.1874	.603
Sun signs, 2nd half of year						
Leo	.2161	.185	.3522	.385	.3036	.326
Virgo	-.1465	.709	.3642	.540	.1422	.657
Libra	-.1061	.682	.5338	.523	.3052	.643
Scorpio	-.1279	.493	.0552	.582	.0229	.558
Sagittarius	-.2219	.394	.5602	.396	.2201	.553
Capricorn	-.3144	.208	.2588	.439	.1513	.462

scores for any of the sun signs which holds up across these two measures of masculinity-femininity.. This would seem to indicate (in a somewhat different manner than Tables 5a or 5b) that the variation between sun sign means on these measures was due to chance factors, rather than some systematic source of variation..

Other Data Analyses

The relationship of hemisphere-of-horoscope predominance to extroversion. During the course of putting this study together, it was suggested to me by professional astrologers and students of astrology alike that the best way to determine an individual's degree of extroversion via astrology was by examining the (north versus south) hemisphere predominance of his/her horoscope. This amounts to determining whether the sun, the moon, and most of the powerful planets in a given individual's natal chart are located in the top half of the horoscope, indicating extroversion, or located in the bottom half of the horoscope, indication ~~in~~traversion. In order to determine hemisphere-of-horoscope predominance, I devised and employed the point system shown in Table 6. This point system resulted in a 3-level astrology-based extroversion variable: "extroverted," "no marked hemisphere predominance," and "introverted." This hemisphere-of-horoscope predominance var-

Table 6

Point system for determining hemisphere-of-horoscope predominance.

1) If Sun and Moon are in opposing vertical-plane (upper versus lower) hemispheres, then neither hemisphere is predominant.

2) a- If the Sun and the Moon are in the same (vertical-plane) hemisphere, then the values of the remaining planets in that hemisphere are summed according to the following point system:

<u>Planet</u>	<u>points</u>
Saturn	10
Jupiter	10
Mars	7
Venus	7
Mercury	7
Uranus	3
Neptune	3
Pluto	3

b- If the sum of the values of these planets in the same hemisphere as the Sun and Moon equals or exceeds 23, the hemisphere involved is predominant.

3) A predominant upper hemisphere indicates extroversion; a predominant lower hemisphere indicates introversion.

iable (referred to in Table 1a, p. 56 above, as Ast/EI-HEMI) was not found to be significantly correlated with scores from the extroversion scale of the EPI, as Table 1a shows.

Factor Analyses. Two factor analyses were performed, one on the astrology-based variables alone, the other on the astrological and psychological variables together.

The factor analysis performed on only the astrological variables of this study resulted in three factors. Table 7 shows the factor loadings involved for each of the astrological variables. Factor I exhibits high loadings on the student-rating-based astrological measure of extroversion (Ast/EI-Stu) and on the corresponding astrologer-based composite measure (Ast/EI-Oy), on the horoscope-derived measure of masculinity-femininity (Ast/MF) and on the odd-signs-versus-even-signs sun sign variable (Odd-even). Factor II shows highest loadings on the half-year grouping sun sign variable (Half-year) and on the hemisphere-of-horoscope predominance variable (Ast/EI-HEMI). Factor III shows highest loadings on the "Odd-even" sun sign variable and on the horoscope variable relating to diurnal position of Saturn, Jupiter and Mars (H.Pos/Sa-Ma, JU).

Table 8 shows the results of a factor analysis performed on both astrological and psychological variables. Of the four factors that emerged, factors I, III and IV

Table 7

Factor analysis of astrological variables after
varimax rotations of principle components

Variables*	Factors**		
	I	II	III
Ast/EI-Stu	<u>.833</u>	.186	.290
Ast/EI-Ov	<u>.835</u>	.095	.119
Ast/MF	<u>-.695</u>	.143	.092
Odd-even	<u>-.571</u>	.268	<u>.584</u>
Ast/EI-HEMI	-.043	<u>.699</u>	-.223
Half-year	-.072	<u>-.746</u>	-.089
H.Pos/Sa-Ma, Ju	-.260	.241	<u>-.763</u>

*Meanings of variable abbreviations can be found in
Table 1b.

**Factor loadings greater than .400 are underlined.

Table 8
Factor analysis of astrological and
psychological variables after vari-
max rotations of principle components

Variables*	Factors**			
	I	II	III	IV
Ast/EI-Stu	<u>.809</u>	-.064	.204	.338
Ast/EI-Ov	<u>.828</u>	.033	.097	.167
Ast/MF	-. <u>703</u>	-.003	.136	.075
Odd-even	-. <u>605</u>	.087	.236	<u>.518</u>
Ast/EI-HEMI	-.042	-.051	<u>.672</u>	-.264
Half-year	-.051	-.089	-. <u>765</u>	-.090
H.Pos/Sa-Ma,Ju	-.215	.053	.221	-. <u>769</u>
extro/EPI	.048	-. <u>508</u>	.095	.147
Fe/CPI	-.028	<u>.786</u>	.179	.080
BSRI	.052	<u>.829</u>	.013	.075

*Meanings of variable abbreviations can be found in Table 1b.

**Factor loadings greater than .400 are underlined.

are virtually the same as (respectively) factors I, II, and III of Table 7. Factor II of Table 8 shows high loadings on the psychological variables alone.

CHAPTER III

DISCUSSION

This study examined the validity of astrology with regard to the personality dimensions of extroversion-intraversion and masculinity-femininity by exploring the degree of correspondance between astrological "assessments" (using that term very loosely) of people on there personality dimensions, and psychological (paper and pencil) measures of these dimensions. Clearly, the results obtained lend no support to the idea that astrological variables influence human beings as to the degree of femininity or extroversion they exhibit.

Experiments #1 and #2 involved a reasonable close approximation to the procedures followed and the astrological variables taken account of by professional astrologers when employing a natal chart to assess degree of extroversion-intraversion or masculinity-femininity of a given individual. The lack of any statistical relationship between the astrological variables of experiments #1 and #2 and the corresponding psychological measures suggests that such astrological procedures, at least with regard to these personality dimensions, are probably invalid.

Experiment #3 failed in its attempt to confirm the

previous positive findings of Gauquelin, Gauquelin and Eysenck (in press) concerning a relationship between certain diurnal positions (at birth) of Saturn, Mars and Jupiter, and extroversion-intraversion. However, the negative findings of experiment #3 do not constitute good evidence contrary to the existence of such a relationship, for two reasons. For one thing, too few subjects were available for one of the astrological conditions of this "experiment" ("Saturn in the ninth or twelfth house at the time of birth") to provide an adequate test of the hypotheses involved. Secondly, it is possible that the findings obtained by Gauquelin, Gauquelin and Eysenck will only occur with a much larger sample than was employed here (they used data from more than 7000 subjects).

Experiment #4 tested a hypothesis about the relationship between natal sun sign and extroversion-intraversion, which was based both upon traditional astrological belief and upon the empirical findings of Mayo, White, and Eysenck (in press). There are a number of competing explanations for the inability of experiment #4 to confirm Mayo et al's findings. One of these is that the original findings of Mayo et al may have been due to chance-however, this seems unlikely since the differences they obtained on extroversion scores between odd versus even-numbered sun signs were significant at the $p < .0001$.

level. A different (and perhaps more plausible) explanation is that the findings they obtained reflect real astrological-type influences; but that this influence is not extremely strong, and thus won't show up unless a larger sample than was used in the present study is employed (Mayo et al employed data from more than 2000 subjects, as compared with the 234 subjects of the present study). A third, competing explanation for the discrepancy between these two sets of findings is that those of Mayo et al were artifactual, due to a type of biasing. A strong argument can be made for this possibility. All of the more than 2000 subjects employed in their study had originally contacted Mr. J. Mayo, one of the authors of the experiment, to have astrological predictions made. Since Mr. Mayo is a well-known astrologer, and since the very act of contacting any professional astrologer for predictions indicates a keen interest in astrology, it is probable that nearly all of the subjects involved had some belief in and (greater-than-average) knowledge of astrology. My contention is that previous exposure to astrology (for example, to personality descriptions of the various sun signs, which generally contain some reference to degree of extroversion) may have affected their appraisal of their own degree of extroversion in some systematic way. This, in turn, could have affected their test scores on

the extroversion scale of the EPI, rather than some astrological influence. Delaney and Woodward's (1974) findings (see p. 21 above) on the effect of exposure to astrological-type personality descriptions on subsequent self-perceptions lend support to this idea. Following this line of reasoning, it is possible that the present study was unable to confirm the Mayo et al findings because the subjects involved had had only the minimal exposure to astrology and the relatively minimal inclination to believe in it that one might find in most university populations, and thus lacked the systematic bias towards viewing themselves as either extroverted or introverted that the Mayo et al sample may have had.

The discrepancy between the findings of Pellegrini's (1973) study and those of experiment #5 of the present study (which attempted to confirm Pellegrini's findings) was striking. Pellegrini originally found no difference between males and females on scores on the Fe scale of the CPI, but found pronounced differences on Fe scale scores for sun signs of the first half of the year versus sun signs of the second half of the year. Experiment #5 obtained findings that were precisely opposite to these--that is, a pronounced main effect for sex was found, with no overall significant differences between sun signs. In light of this discrepancy, plus the fact that one of the primary design features of the Fe scale

of the CPI is its ability to discriminate consistently between males and females, the reliability of Pellegrini's original findings appears doubtful.

The two data manipulations reported under the heading "Other Data Analyses" (p. 77 above) also provided information worth noting. One of these sought evidence for the contention of astrologers that a preponderance of astrological influences in the upper versus the lower hemisphere of the horoscope is differentially related to extroversion, but found none. The other data analysis, the two factor analyses, indicated that essentially four factors are responsible for most of the variance exhibited by the variables of this study (see Table 8). The first factor was represented most strongly by the three astrological variables that took into account many "influences" in the horoscope (Ast/EI-Stu, Ast/EI-Ov, and Ast/MF) and by the sun sign variable "odd-even". The most likely interpretation of this factor is that it represents variation of scores based on "odd-numbered" versus "even-numbered" astrological signs. The variance of the variables "Ast/EI-Stu" and "Ast/EI-Ov" (see Table 1b for the meanings of these abbreviations) is as dependent on the distinction between odd versus even astrological signs as the variance of "Ast/MF" and "odd-even," although in a less obvious way than was the case for these latter two variables. The second factor involved

all of the psychological variables and only the psychological variables, reinforcing the impression of no relationship between these (psychological) variables and the astrological variables. The third factor (which had heavy loadings on "Ast/EI-HEMI" and "Half-year") and the fourth factor (heavy loadings on "Odd-even" and H.Pos/Sa-Ma, Ju--see Table 1b for explanation of variable abbreviations) do not readily admit of interpretation. The lack of any obvious connection between the members of either set of variables is reflected in the low correlations between them shown in Table 1a. Although these two factors account for a significant portion of variance in this study, I am unable to explain either why they exist or what they mean.

In conclusion, no evidence supportive of the validity of astrology, so far as the specific hypotheses tested are concerned, emerged from the present study. Indeed, two previous studies which appeared to provide evidence of an astrological influence on human behavior (Pellegrini, 1973; and Mayo, White and Eysenck, in press) seem of dubious validity in light of present (negative) findings.

It may well be that astrology, at least as traditionally practiced by astrologers, has no empirical va-

lidity whatsoever. Obviously, no study can ever prove that, although a preponderance of negative evidence would make such an assertion more likely. The best test of the empirical validity of traditional astrology has yet to be made in a thorough manner, and would consist in testing the ability of professional astrologers themselves to assess a broad range of personality variables, and then validating this assessment against some more objective measure(s) of these variables. If astrologers could demonstrate any empirical accuracy at all, researchers could then move on to the question of how they do it. If not, the question of the validity of astrology could be abandoned with greater certainty.

Even if traditional astrology cannot provide fruitful hypotheses concerning the effects of astronomical objects on human behavior, such relationships may yet be uncovered through research which makes fewer a priori assumptions about the nature of such relationships. The work of Cooper and Smithers (1975) or of Gauquelin (1960) provide good examples of research of this kind. It is still too early to tell whether research along these lines will provide genuinely valid findings.

APPENDIX A

Announcement used to recruit subjects

TO: Psych 115 Students
FROM: M. Rockowitz
RE: Experiment on Astrology

92

All Psych 115 Students are invited and encouraged to participate in a study on the validity of Astrology. I am investigating whether the position of the planets when a person is born is a valid indicator of what that person is like in certain respects.

Each student who participates will earn one experimental credit. Participation will consist in filling out 4 questionnaires, which will take less than an hour.

If you are at all able to do so, it is extremely important that you find out the time that your birth took place beforehand, and provide this information at the time that you come to participate as a subject (one way to obtain this information is to ask your parents). On the other hand, if you cannot find out the time of your birth (that is, if you only know your date of birth) you are still welcomed and encouraged to participate for credit in this experiment. The data your questionnaire responses provide me with will still be useable if I only have your date of birth; however, that data will be most useful to me if you also provide me with the time of your birth.

Sometime before finals week in April, a summary of the hypotheses tested and any results obtained by that time will be circulated among all sections of Psych 115.

All students interested in participating in this experiment should choose from among the times below, and go to the appropriate room:

Monday, February 12, from 12 noon to 6:00 P.M.
Room B-02 Memorial Hall (opposite University Centre)

Tuesday, February 13, from 9:30 P.M. to 10:30 P.M.
Room 1120 Math Building

Thursday, February 15, from 9:00 A.M. to 6:00 P.M.
Room B-02 Memorial Hall

See you there,

Mike Rockowitz

APPENDIX B

Questionnaire packet filled out by subjects

- 1) questionnaire requesting demographic,
time-and-place-of-birth, and previous-
exposure-to-astrology information
- 2) extroversion scale of the Eysenck
Personality Inventory
- 3) Fe scale of the California Psycho-
logical Inventory
- 4) the Bem Sex-Role Inventory

Directions: Please respond to all numbered items. Don't hesitate to ask if you are unclear as to how a particular item should be filled out.

- 1) Student number _____
- 2) Section number _____
- 3) Sex _____
- 4) Age _____
- 5) Name of 115 T.A. _____
- 6) Date of Birth: Day _____ Month _____ Year _____
- 7) Time of Birth (leave blank if unknown): Hour _____
Minute _____
AM or PM _____
- 8) How accurate is your Time of Birth?
 - a) accurate to within 15 minutes
 - b) accurate to within 30 minutes
 - c) accurate to within 45 minutes
 - d) accurate to within 1 hour
 - e) may be "off" by more than 1 hour
- 9) Place of Birth: City _____
Town or Suburb _____
Country _____
- 10) How many years have you been attending university? _____
- 11) What is your major? _____
- 12) Please circle the choice that reflects your marital status:
 - a) single
 - b) married
 - c) divorced
 - d) widowed
- 13) How many books or magazines on Astrology have you read? (circle the appropriate number): 0 1 2 3 4 5 6 6+
- 14) How often do you read your own "horoscope" in the astrology column of your newspaper?
 - a) every day
 - b) a few times per week
 - c) about once a week
 - d) a few times a month
 - e) very seldom or never
- 15) Have you ever had your horoscope ("natal chart") drawn up or cast, or have you drawn one up yourself?
 - a) yes
 - b) no
- 16) What is/are the religion(s) of your parents? (Please specify):
Mother _____ Father _____
- 17) What language(s) is/are spoken fluently by your parents? (Please specify):
Mother _____ Father _____

- 18) What language(s) do you speak fluently? (Please specify):

19) In which country(s) did your parents grow up? (Please specify):

Mother _____

Father _____

20) In which country(s) did you grow up? (Please specify):

21) What is your father's occupation, or what was his occupation at retirement?

22) What was your family's economic level while you were growing up?

- a) lower working class b) upper working class c) lower middle class
d) middle class e) upper middle class

Directions: Here are a series of statements. Read each one, decide how you feel about it, and then circle either "T" for TRUE or "F" for FALSE. If you agree with a statement, or feel that it is true about you, answer TRUE. If you disagree with a statement, or feel that it is not true about you, answer FALSE.

If you find a few questions which you cannot or prefer not to answer, they may be omitted.

- | | | |
|---|---|---|
| 1) I am very slow in making up my mind. | T | F |
| 2) I think I would like the work of a building contractor. | T | F |
| 3) I think I would like the work of a dress designer. | T | F |
| 4) I become quite irritated when I see someone spit on the sidewalk. | T | F |
| 5) It is hard for me to start a conversation with strangers. | T | F |
| 6) I must admit that I enjoy playing practical jokes on people. | T | F |
| 7) I get very tense and anxious when I think other people are disapproving of me. | T | F |
| 8) A windstorm terrifies me. | T | F |
| 9) I think I would like the work of a clerk in a large department store. | T | F |
| 10) I get excited very easily. | T | F |
| 11) I like to boast about my achievements every now and then. | T | F |
| 12) I think I would like the work of a garage mechanic. | T | F |
| 13) I like adventure stories better than romantic stories. | T | F |
| 14) I prefer a shower to a bathtub. | T | F |
| 15) The average person is not able to appreciate art and music very well. | T | F |
| 16) The thought of being in an automobile accident is very frightening to me. | T | F |
| 17) At times I feel like picking a fist fight with someone. | T | F |
| 18) Sometimes I have the same dream over and over. | T | F |
| 19) I think I am stricter about right and wrong than most people. | T | F |

- | | | |
|---|---|---|
| 20) I think I would like to drive a racing car. | T | F |
| 21) I like to be with a crowd who play jokes on one another. | T | F |
| 22) I am somewhat afraid of the dark. | T | F |
| 23) I think I could do better than most of the present politicians if I were in office. | T | F |
| 24) I always tried to make the best school grades that I could. | T | F |
| 25) I am inclined to take things hard. | T | F |
| 26) I would like to be a soldier. | T | F |
| 27) I like to go to parties and other affairs where there is lots of loud fun. | T | F |
| 28) I very much like hunting. | T | F |
| 29) In school I was sometimes sent to the principal for cutting up. | T | F |
| 30) I think I would like the work of a librarian. | T | F |
| 31) Sometimes I feel that I am about to go to pieces. | T | F |
| 32) I would like to be a nurse. | T | F |
| 33) If I were a reporter I would like very much to report news of the theatre. | T | F |
| 34) I like mechanics magazines. | T | F |
| 35) I want to be an important person in the community. | T | F |
| 36) I must admit I feel sort of scared when I move to a strange place. | T | F |
| 37) I am pretty sure I know how we can settle the international problems we face today. | T | F |
| 38) If I get too much change in a store, I always give it back. | T | F |

Directions: Here are some questions regarding the way you feel, behave and act. After each question, circle either "Y" for YES or "N" for NO.

Try and decide whether YES or NO represents your usual way of acting and feeling. Then respond to the question by circling the appropriate response.

Work quickly, and don't spend too much time over any question; what is wanted is your first reaction, not a long-drawn-out thought process. This whole series of questions should take a very brief time, a few minutes at most. Be sure not to omit any questions. There are no right or wrong answers, and this isn't a test of intelligence or ability, but simply a measure of the way you behave.

- | | | | |
|-----|---|---|---|
| 1) | Do you prefer plenty of excitement and bustle around you? | Y | N |
| 2) | Do you nearly always have a "ready answer" when people talk to you? | Y | N |
| 3) | Do you usually stay in the background at parties and "get-togethers"? | Y | N |
| 4) | When you are drawn into a quarrel, do you prefer to "have it out" to being silent hoping things will blow over? | Y | N |
| 5) | Do you like mixing with people? | Y | N |
| 6) | Would you call yourself happy-go-lucky? | Y | N |
| 7) | Do you like working alone? | Y | N |
| 8) | Are you rather lively? | Y | N |
| 9) | Do you feel uncomfortable in anything but everyday clothes? | Y | N |
| 10) | Can you put your thoughts into words quickly? | Y | N |
| 11) | Do you like practical jokes? | Y | N |
| 12) | Do you very much like good food? | Y | N |
| 13) | Do you mind selling things or asking people for money for some good cause? | Y | N |
| 14) | Would you rather be at home on your own than go to a boring party? | Y | N |

- | | | |
|---|---|---|
| 15) Do you like planning things carefully, well ahead of time? | Y | N |
| 16) Can you usually do things better by figuring them out alone than by talking to others about it? | Y | N |
| 17) Are you an easy-going person, not generally bothered about having everything "just-so"? | Y | N |
| 18) Would you rather plan than do things? | Y | N |
| 19) When you make new friends, is it usually you who makes the first move, or does the inviting? | Y | N |
| 20) Do you generally feel that things will sort themselves out and come right in the end somehow? | Y | N |
| 21) Do you sometimes say the first thing that comes into your head? | Y | N |
| 22) Do you usually keep "yourself to yourself" except with very close friends? | Y | N |
| 23) Do you like cracking jokes and telling funny stories to your friends? | Y | N |
| 24) When the odds are against you, do you still usually think it worth taking a chance? | Y | N |

Directions: On the next page you will be shown a large number of personality characteristics. Please use these characteristics in order to describe yourself. That is, on a scale from 1 to 7, indicate how true of you these various characteristics are. Please do not leave any characteristic unmarked.

EXAMPLE: sly

Mark a 1 if it is NEVER OR ALMOST NEVER TRUE that you are sly.

Mark a 2 if it is USUALLY NOT TRUE that you are sly.

Mark a 3 if it is SOMETIMES BUT INFREQUENTLY TRUE that you are sly.

Mark a 4 if it is OCCASIONALLY TRUE that you are sly.

Mark a 5 if it is OFTEN TRUE that you are sly.

Mark a 6 if it is USUALLY TRUE that you are sly.

Mark a 7 if it is ALWAYS OR ALMOST ALWAYS TRUE that you are sly.

Thus, if you feel it is sometimes but infrequently true that you are "sly", never or almost never true that you are "malicious", always or almost always true that you are "irresponsible", and often true that you are "carefree", then you would rate these characteristics as follows:

Sly 3
Malicious 1

Irresponsible 7
Carefree 5

1	2	3	4	5	6	7
Never or almost never true	Usually not true	Sometimes but infrequently true	Occasionally true	Often true	Usually true	Always or almost always true
Self reliant					Makes decisions easily	
Yielding					Compassionate	
Helpful					Sincere	
Defends own beliefs					Self-sufficient	
Cheerful					Eager to soothe hurt feelings	
Moody					Conceited	
Independent					Dominant	
Shy					Soft spoken	
Conscientious					Likeable	
Athletic					Masculine	
Affectionate					Warm	
Theatrical					Solemn	
Assertive					Willing to take a stand	
Flatterable					Tender	
Happy					Friendly	
Strong personality					Aggressive	
Loyal					Gullible	
Unpredictable					Inefficient	
Forceful					Acts as a leader	
Feminine					Childlike	
Reliable					Adaptable	
Analytical					Individualistic	
Sympathetic					Doesn't use harsh language	
Jealous					Unsystematic	
Has leadership abilities					Competitive	
Sensitive to needs of others					Loves children	
Truthful					Tactful	
Willing to take risks					Ambitious	
Understanding					Gentle	
Secretive					Conventional	

APPENDIX C

Statements/Statement sets rated by graduate students

FROM: M. ROCKOWITZ

TO:

RE: Rating statements as to the degree of intra-
version or extroversion they express, for my
astrology study.

Thanks for having agreed to perform this rating task. Each of the statements or statement sets to be rated is associated with a specific astrological (planetary) position. Your ratings will aid me in coming to a consensus about which of these statements (and therefore which of the associated planetary positions) reflect either intra-version or extroversion.

Eysenck & Eysenck (1964) said this about the nature of extroversion:

"The typical extrovert is sociable, likes parties, has many friends, needs to have people to talk to and does not like reading or studying by himself. He craves excitement, takes chances, often sticks his neck out, acts on the spur of the moment and is generally an impulsive individual. He is fond of practical jokes, always has a ready answer and generally likes change; he is carefree, easygoing, optimistic and likes to laugh and be merry. He prefers to keep moving and doing things, tends to be aggressive and lose his temper quickly; altogether his feelings are not kept under tight control and he is not always a reliable person.

On the other hand, Eysenck & Eysenck (1964) had this to say about the nature of intraversion:

"The typical intravert is a quiet, retiring sort of person, introspective, fond of books rather than people; he is reserved and distant except to intimate friends. He tends to plan ahead, 'looks before he leaps,' and distrusts the impulse of the moment. He does not like excitement, takes matters of everyday life with proper seriousness and likes a well-ordered mode of life. He keeps his feelings under close control, seldom behaves in an aggressive manner and does not lose his temper easily. He is reliable, somewhat pessimistic, and places great value on ethical standards."

It should be kept in mind that these sets of statements represent the extremes of extroversion and introversion.

On each page of statements to be rated which follows, you will find the following rating scale under the first statement at the top of the page,

Ex.	3	2	1	0	1	2	3	In.
	Str.	Mod.	Mi.	Nil	Mi.	Mod.	Str.	

and the corresponding numbers (representing the "degrees" of the scale) under the remaining statements. The abbreviation "Ex." on the left-hand side stands for extroversion, while the abbreviation "In." on the right-hand side stands for introversion. "Str." stands for strong (i.e., strongly introverted or extroverted); "Mod." stands for moderate (moderately introverted or extroverted) "Mi." stands for mild (mildly introverted or extroverted); and "Nil" stands for a statement that reflects neither introversion nor extroversion, or that reflects both introversion and extroversion equally. Simply circle the choice on the scale that

indicates the direction in which and degree to which the statement in question reflects either extroversion or introversion. Please remember that the distances between successive "degrees" should be regarded as being equal.

When making your judgments, first determine whether the statement or statement set in question expresses extroversion or introversion as these terms are defined by Eysenck (above), and if so, rate it accordingly. If not, but if it expresses introversion or extroversion according to some other definition of these terms that you know (perhaps your own intuitive definition, or that of another theorist), rate it according to this other definition and place an "0" in the right-hand margin next to the statement. Lastly, place a "B" in the right-hand margin next to the statement or statement set if your judgment was based upon both Eysenck's definition of the extroversion-introversion dimension and some other definition of these terms.

Eysenck, S.B.G. and Eysenck, H.J. The personality of judges as a factor in the validity of their judgment of extroversion-introversion. British Journal of Social and Clinical Psychology, 1964, Vol. 3, 141-144.

1. This person is direct in his self-expression; is impulsive, is competitive, and seeks recognition.
- | | | | | | | | | |
|-----|------|------|-----|-----|-----|------|------|-----|
| Ex. | 3 | 2 | 1 | 0 | 1 | 2 | 3 | In. |
| | Str. | Mod. | Mi. | Nil | Mi. | Mod. | Str. | |
2. This person is socially outgoing.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
3. This person is impulsive, courageous, has lots of energy, takes the initiative in group activities, sparks enthusiasm in others, is independent, and is competitive.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
4. This person has vitality, abundant energy, and ambition for success.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
5. This person is talkative and has a general curiosity.
- | | | | | | | | | |
|-----|---|---|---|---|---|---|---|-----|
| Ex. | 3 | 2 | 1 | 0 | 1 | 2 | 3 | In. |
|-----|---|---|---|---|---|---|---|-----|
6. This person has a pleasing manner and personal grace, optimism about life in general, and mixes easily socially.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
7. This person is aggressive and outgoing, impulsive, and has the capacity for action, self-confidence, and courage.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
8. This person has an optimistic and sociable personality, is popular, has self-confidence, and is honest, friendly, and benevolent.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
9. This person is serious minded and hard working, and seems cold and unfriendly to the observer.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
10. This person is a loner and aloof, and has difficulty cooperating with and getting along with others.
- | | | | | | | | | |
|-----|---|---|---|---|---|---|---|-----|
| Ex. | 3 | 2 | 1 | 0 | 1 | 2 | 3 | In. |
|-----|---|---|---|---|---|---|---|-----|
11. This person thinks and acts swiftly, is a chatterbox, has an inventive imagination, is high strung, is popular, is witty in conversation, is sociable, is

careful with his own money but squanders other people's money.

- | Ex. | 3 | 2 | 1 | 0 | 1 | 2 | 3 | In. |
|-----|---|------|-----|-----|-----|------|------|-----|
| | Str. | Mod. | Mi. | Nil | Mi. | Mod. | Str. | |
| 12. | This person is quick-willed and resourceful, talks incessantly, and is restless and fidgety. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 13. | This person communicates easily, accurately and rapidly in speech and in writing, and has trouble making and sticking to decisions. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 14. | This person is sociable, is witty and has good conversational ability. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 15. | This person has an active and critical mind, loves debate and intellectual contest, and has ingenuity and resourcefulness. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 16. | This person has marked and broad intelligence and curiosity, has many friends and acquaintances, and is an "ivory-tower" scholar removed from the practical application of his field. | | | | | | | |
| Ex. | 3 | 2 | 1 | 0 | 1 | 2 | 3 | In. |
| 17. | This person easily becomes emotionally involved, has a more active fantasy life than average and is strongly influenced by his imagination, and tires easily of monotonous routine. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 18. | This person communicates well through speech and writing, and communicates easily with spouse and close friends. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 19. | This person has an optimistic, philosophic, and spiritually oriented mentality. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 20. | This person's speech is a deliberate expression of his thought, and he is methodical in his thinking. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |

21. This person is easily hurt emotionally, is sensitive and shy, tends to withdraw and find security in solitude, oscillates between being sweet and outgoing and melancholic and introverted, is tactful, is moody, and is somewhat intolerant.

Ex. 3 2 1 0 1 2 3
 Str. Mod. Mi. Nil Mi. Mod. Str. In.

22. This person has a great deal of depth and intensity to his emotions, and tends to withdraw and brood when slighted.

3 2 1 0 1 2 3

23. This person has fluctuating and unpredictable moods.

3 2 1 0 1 2 3

24. This person is especially inhibited in the expression of his emotions, and hides his inner feelings from public view.

3 2 1 0 1 2 3

25. This person likes being the center of attention, is overly confident, frank, and outspoken, and has a reckless courage.

3 2 1 0 1 2 3

26. This person is an emotionally proud individual, with a flair for dramatics and a sunny disposition.

Ex. 3 2 1 0 1 2 3 In.

27. This person has a dramatic and forceful manner of speech, has confidence in his intellectual abilities, tends to deal with things in large general terms and overlook essential details.

3 2 1 0 1 2 3

28. This person is warmhearted, outgoing, sunny and affectionate.

3 2 1 0 1 2 3

29. This person has much energy, willpower and creativity, has a natural ability for leadership, is strongly competitive; and has strong and undeviating beliefs and opinions.

3 2 1 0 1 2 3

30. This person is optimistic, expansive and self-confident, has much energy, and can inspire confidence and enthusiasm in others.

Ex. 3 2 1 0 1 2 3 In.
 Str. Mod. Mi. Nil Mi. Mod. Str.

31. This person is enthusiastic towards life, is highly competitive, has a sunny, happy disposition, has many friends, and has an almost blind self-confidence.

3 2 1 0 1 2 3

32. This person can express himself in a dramatic and forceful way in writing and speech, and is attracted to games involving mental competition.

3 2 1 0 1 2 3

33. This person has a strong pleasure orientation, a general love of life, and a sunny outlook.

3 2 1 0 1 2 3

34. This person actively pursues love and pleasure, is aggressive and emotional concerning love and romance, and likes outdoor competitive sports.

3 2 1 0 1 2 3

35. This person is meticulous, careful, and efficient in work.

Ex. 3 2 1 0 1 2 3 In.

36. This person has an exacting, hardworking and practical nature, is shy and retiring, and prefers to work behind the scenes.

3 2 1 0 1 2 3

37. This person insists on minute precision and accuracy, and tends to lose sight of main details through over-concern with less important details.

3 2 1 0 1 2 3

38. This person has congenial relations with co-workers, has a sense of social and sexual inferiority, and has a cold exterior.

3 2 1 0 1 2 3

39. This person tends to be a perfectionist, is fussy and highly critical where detailed methodology and pre-

cision are concerned.

- | Ex. | 3 | 2 | 1 | 0 | 1 | 2 | 3 | In. |
|-----|--|------|-----|-----|-----|------|------|-----|
| | Str. | Mod. | Mi. | Nil | Mi. | Mod. | Str. | |
| 40. | This person has congenial relations with co-workers. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 41. | This person is concerned with detail, accuracy and precision at work, and tends to be austere, gloomy and depressed. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 42. | This person's emotional state affects his work and his relationships with people at work. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 43. | This person's social and romantic involvements are established through work, and he establishes congenial relationships with people at work. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 44. | This person has charm and grace in expression, has a strong need for companionship, is involved with activities that involve social relations and contact with the public. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 45. | This person is easily upset by relationships that that don't go well, has charm and elegance in his personal appearance and mannerisms, and is courteous, gracious and kind to everyone. | | | | | | | |
| Ex. | 3 | 2 | 1 | 0 | 1 | 2 | 3 | In. |
| 46. | This person is intensely concerned with the behavior and thinking patterns of others, and with good communication in relationships among people. He is easy to communicate with, and likes to consider all sides before making decisions. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 47. | This person considers harmonious <u>social</u> relationships extremely important, avoids conflict situations, and has an innate ability for understanding others. He desires to please others, is generally well liked, and has high standards for social conduct and manners. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |

48. This person initiates social activity, likes to be noticed and appreciated, and likes to act in partnership with others.

Ex.	3	2	1	0	1	2	3	In.
	Str.	Mod.	Mi.	Nil	Mi.	Mod.	Str.	

49. This person is popular, has good relations with supervisors, and has a self-confident manner.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

50. This person is concerned with communication and mental cooperation with others, and prefers to work in some kind of partnership rather than individually.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

51. This person is popular, has pleasing manners, and has a good ability for dealing with the public.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

52. This person is aggressively involved with partnership activities or with working with the public, and prefers to work and act in cooperation with someone else.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

53. This person is open, benevolent, and friendly towards others.

Ex.	3	2	1	0	1	2	3	In.
-----	---	---	---	---	---	---	---	-----

54. This person works hard and conscientiously in cooperation with others, and upholds his share of responsibility.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

55. This person is easily affected by other peoples' moods and feelings.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

56. This person remains silent rather than giving a watered-down version of his true opinions and emotions, and is highly secretive.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

57. This person takes his personal affairs very seriously.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

58. This person prefers to say exactly what he feels or remain silent, and communicates only when communi-

cation serves a definite purpose. Also, he carries on many plans and endeavors in secret.

- | | | | | | | | | |
|-----|------|------|-----|-----|-----|------|------|-----|
| Ex. | 3 | 2 | 1 | 0 | 1 | 2 | 3 | In. |
| | Str. | Mod. | Mi. | Nil | Mi. | Mod. | Str. | |
59. This person acts reservedly until he is sure of his relationship with someone, and is highly sensitive to the feelings of others.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
60. This person is secretive in that he doesn't reveal his plan of action without good reason, and tends to be overly course and blunt.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
61. This person is a perfectionist at his work, and accepts responsibilities with a serious emotional intensity.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
62. This person tends to be secretive, especially about information he considers personal or important. Also, he plans in secret, and is ingenious at forming strategies.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
63. This person has overly intense emotions.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
64. This person is interested in occult subjects, takes life as a serious business, and has little patience for trivialities.
- | | | | | | | | | |
|-----|---|---|---|---|---|---|---|-----|
| Ex. | 3 | 2 | 1 | 0 | 1 | 2 | 3 | In. |
|-----|---|---|---|---|---|---|---|-----|
65. This person is naturally outgoing, and is honest, just and generous. Also, he is straightfoward, and tells people the undiluted truth about themselves.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
66. This person is optimistic and cheerful.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
67. This person is friendly, vivacious, sociable and outgoing, and is frankly outspoken about inner feelings.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
68. This person is direct and open in his attitudes and actions.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|

69. This person is neat and methodical at work, is generally careful, and has a tendency to be melancholic.

Ex. 3 2 1 0 1 2 3
 Str. Mod. Mi. Nil Mi. Mod. Str. In.

70. This person has a reserved and cautious nature, and is inclined to be cold and austere. He takes life seriously, and is often shy and insecure about his own worth.

3 2 1 0 1 2 3

71. This person is proud and reserved in public, disliking overt public displays of emotion and affection. He desires to feel superior to the common lot, and has a sense of aloofness about him which generates a subtle mystique.

3 2 1 0 1 2 3

72. This person has an aura of dignity and seriousness.

3 2 1 0 1 2 3

73. This person has a strong sense of his own dignity. Also, he has a strong moral sense, and feels obliged to set a good example for others.

3 2 1 0 1 2 3

74. This person enjoys meeting new people and exchanging ideas, is gregarious, and has friends of both sexes. He appears calm, but is really quite anxious.

Ex. 3 2 1 0 1 2 3 In.

75. This person likes to function in conjunction with others, and is involved with group and organizational work.

3 2 1 0 1 2 3

76. This person is popular and well liked, has many friends, and is attracted to those who will help him expand his social outlets.

3 2 1 0 1 2 3

77. This person desires to share and experience with people from all walks of life, attracts many friends, and is involved in humanitarian organizational activities.

3 2 1 0 1 2 3

78. This person is interested in friendships and group activities, and has strong humanitarian feelings and a sense of brotherhood.

Ex. ³ ² ¹ ⁰ ¹ ² ³
Str. Mod. Mi. Nil Mi. Mod. Str. In.

79. This person has a powerful emotional need for friendships and group activities. He doesn't like to be alone, and his house is used as a place for group activity.

3 2 1 0 1 2 3

80. This person is keenly interested in communication and the exchange of ideas with friends and in groups.

3 2 1 0 1 2 3

81. This person has warm friendships and relationships established through group activities, and has many friends of the opposite sex.

3 2 1 0 1 2 3

82. This person direct much energy towards friendships and group activities, and friends are often of a masculine, aggressive type.

3 2 1 0 1 2 3

83. This person is well liked, and achieves his goals through friendships and group activities.

Ex. 3 2 1 0 1 2 3 In.

84. This person has a sense of brotherhood with people from all walks of life, has many unusual friendships, and is fond of group activities which have a scientific or humanitarian purpose.

3 2 1 0 1 2 3

85. This person always seems to have a "tired feeling," is indecisive, has charm, humour, and sympathy, has an air of aloofness, has an overactive imagination, and tends to see himself chained to a destiny not of his own making.

3 2 1 0 1 2 3

86. This person feels psychologically vulnerable and withdraws into seclusion to protect himself emotionally. He has a vivid imagination.

3 2 1 0 1 2 3

87. This person has a vivid imagination, is highly intuitive, likes to be secretive and keeps his private thoughts to himself.

	3	2	1	0	1	2	3	
Ex.	Str.	Mod.	Mi.	Nil	Mi.	Mod.	Str.	In.

88. This person has deep compassion, strong sympathy and empathy, and can identify with all types of humanity.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

89. This person's excessive emotional sensitivity stands in the way of self-confidence and direct decisive action. He tends to act in secret in order to avoid direct confrontation with potential opponents, can become highly emotional and is prone to tears.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

90. This person has an overactive, fearful imagination that generates all types of anxieties and neuroses.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

91. This person is somewhat retiring.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

92. This person is generally secretive about his inner thoughts and ideas, and is often shy.

Ex.	3	2	1	0	1	2	3	In.
-----	---	---	---	---	---	---	---	-----

93. This person loves quiet and solitude, is socially shy, is sensitive and easily hurt, and has much compassion.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

94. This person's work and other activities will be carried out in secret or in seclusion. He is often secretive about desires and purposes.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

95. This person is interested in an inner spiritual search through seclusion, meditation, and introspective study.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

96. This person seeks privacy and seclusion.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

97. This person is generally cheerful and optimistic, is fond of fun and social activities, and expresses him-

self easily.

- | Ex. | 3 | 2 | 1 | 0 | 1 | 2 | 3 | In. |
|------|---|------|-----|-----|-----|------|------|-----|
| | Str. | Mod. | Mi. | Nil | Mi. | Mod. | Str. | |
| 98. | This person has a pleasing personality and a generous, optimistic nature. He is enthousiastic, and concerned for the good of all. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 99. | This person is somewhat inhibited in his self expression. He tends to be sad and self-depreciating. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 100. | This person has a somewhat somber personality, is inclined to emotional depression and lack of joy in life, and is considered a "wet blanket" by others. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 101. | This person's enthousiasm brings him popularity. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 102. | This person is emotionally alone against the world, is depressed, and has a negative emotional outlook. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 103. | This person possesses diplomacy in communicating with others. His mental endeavors are carried out in partnerships, and he enjoys and bears good will towards others. | | | | | | | |
| Ex. | 3 | 2 | 1 | 0 | 1 | 2 | 3 | In. |
| 104. | This person has a sharp mind, abundant mental energy, is aggressive and says exactly what he thinks. He is decisive and acts upon his decisions. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 105. | This person has a vivid imagination, tends to be a dreamer, and often likes to be left alone. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 106. | This person is popular and is considered an intellectual leader. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| 107. | This person is skillful in communicating with the public, and has social wit and conversational ability. | | | | | | | |
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |

108. This person has an intense love of life and emotional warmth, and is gregarious and outgoing.

Ex. 3 2 1 0 1 2 3
 Str. Mod. Mi. Nil Mi. Mod. Str. In.

109. This person has an optimistic and generous disposition, and is cheerful, friendly and sociable towards others.

3 2 1 0 1 2 3

110. This person is not as socially outgoing as other people.

3 2 1 0 1 2 3

111. This person has an effervescent, sparkling personality, is quite popular, and loves social activities, amusement and parties.

3 2 1 0 1 2 3

112. This person has good timing in forming relationships favorable for money, romance, partnerships, marriage, and friendship.

3 2 1 0 1 2 3

113. This person tends to feel lonely and personally isolated, suffers frequent social brush-offs, and has an inferiority complex.

Ex. 3 2 1 0 1 2 3 In.

114. This person is impulsive, constantly seeks excitement through danger or unusual action, is courageous and decisive, and lacks prudence.

3 2 1 0 1 2 3

115. This person has an aggressive and forceful personality, and dominates others unless held in check.

3 2 1 0 1 2 3

116. This person has a serious outlook on life. He works hard and never-endingly.

3 2 1 0 1 2 3

117. This person has optimism and self-confidence, and inspires the confidence and goodwill of others.

3 2 1 0 1 2 3

118. This person is serious and secretive in his plans and projects.

3 2 1 0 1 2 3

119. This person appears austere, self-absorbed, serious and reserved towards others, and is unpopular.

Ex.	3	2	1	0	1	2	3	In.
	Str.	Mod.	Mi.	Nil	Mi.	Mod.	Str.	

120. This person is reserved.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

121. This person is popular, is other-directed, and has a jovial, cheerful, optimistic nature.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

122. This person is popular, has harmonious marriage(s) and friendships, is at peace with himself, and has good health and vitality.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

123. This person has a generous and optimistic nature, is self-confident, and is charitable.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

124. This person is at ease in his social relations and communications with friends, neighbors and groups, has an affectionate nature, has charm, and is popular with the opposite sex and with people in general.

Ex.	3	2	1	0	1	2	3	In.
-----	---	---	---	---	---	---	---	-----

125. This person is generous, sympathetic, and is genuinely fond of people. He is content, and has an optimistic and cheerful disposition.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

126. This person has quick emotional responses and intuitive rapport with others. Also, he has a magnetic quality that infuses excitement and fun into everyday conditions.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

127. This person has much mental energy and a sharp intellect, is decisive, and is verbally straightforward and speaks clearly.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

128. This person is able to express himself eloquently and has an optimistic outlook.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

129. This person has a disciplined mind, used prudence and forethought in decision-making, speech and writing, and has a purpose behind every move and thought.

Ex. 3 2 1 0 1 2 3
 Str. Mod. Mi. Nil Mi. Mod. Str. In.

130. This person has a happy, energetic disposition, is socially inclined and vivacious, is popular, and is impulsively generous.

3 2 1 0 1 2 3

131. This person has a happy disposition and strong social tendencies, likes people and knows how to get along with them, is popular and has many friends, and is kind and generous.

3 2 1 0 1 2 3

132. This person has a vivacious emotional expressiveness, and is popular and has many friends.

3 2 1 0 1 2 3

133. This person acts graciously with others, is a natural diplomat, and has a cheerful disposition.

3 2 1 0 1 2 3

134. This person has a Spartan attitude towards life, and often appears cold and austere.

Ex. 3 2 1 0 1 2 3 In.

135. This person has a capacity for rapid, decisive action, and has a forceful disposition.

3 2 1 0 1 2 3

136. This person has tremendous energy, courage and will-power.

3 2 1 0 1 2 3

137. This person is frank, direct and forceful in his self-expression and in his dealing with others.

3 2 1 0 1 2 3

138. This person is optimistic, is kindly disposed towards others and altruistic, and has many friends and is well-liked.

3 2 1 0 1 2 3

139. This person has grace in his personal self-expression, and has popularity with the public. He has

a generous , optimistic outlook on life, and has the ability to arouse enthusiasm in others.

Ex. ³ ² ¹ ⁰ ¹ ² ³
Str. Mod. Mi. Nil Mi. Mod. Str. In.

140. This person has self-discipline, and conscientiously discharges his responsibilities.

3 2 1 0 1 2 3

141. This person has a serious disposition, a sense of responsibility, integrity, and reliability. He has a great deal of self discipline, and is sometimes considered cold and austere.

3 2 1 0 1 2 3

142. This person improves his professional standing through forethought, discipline, and sustained effort.

3 2 1 0 1 2 3

143. This person expresses himself and relates to others in an unusual way, can be relied on to do and say out of the ordinary things, and is sought after as an interesting person. He has an intuitive ability to deal with others and evoke their cooperation.

3 2 1 0 1 2 3

144. This person is emotionally insecure, and his ability for self-expression is somewhat hampered.

3 2 1 0 1 2 3

145. This person exhibits overly vigorous impulsive behavior, often tries to achieve his desires by force, and is resented by others who consider him brash and egotistical.

Ex. 3 2 1 0 1 2 3 In.

146. This person has a life of hardship and drudgery, and has a pessimistic outlook.

3 2 1 0 1 2 3

147. This person often has unusual emotional desires and romantic tendencies, spends too much time in a private fantasy world, and tends to indulge in self-destructive acts.

3 2 1 0 1 2 3

148. This person is forceful and domineering, desires to make people over, and tends to be overly aggressive with the opposite sex.

Ex. ³ ² ¹ ⁰ ¹ ² ³ In.
Str. Mod. Mi. Nil Mi. Mod. Str.

149. This person tries to dominate others, has difficulty making himself understood, and generally has trouble in relating to others.

3 2 1 0 1 2 3

150. This person is emotionally volatile, becomes easily upset and loses his temper, and is forceful and aggressive.

3 2 1 0 1 2 3

151. This person has a bleak view of life and lacks emotional vitality, is depressing, lackluster and moody, and tends to isolate himself.

3 2 1 0 1 2 3

152. This person has an intensely emotional nature, and others, especially women, are uneasy in his (her) presence.

3 2 1 0 1 2 3

153. This person has an active, energetic mind which tends to take an argumentative, partisan view. He lacks tact, and is fond of debates and arguments.

Ex. 3 2 1 0 1 2 3 In.

154. This person tends to worry excessively, and tends to have a pessimistic outlook on life.

3 2 1 0 1 2 3

155. This person makes snap judgments. He tends to alienate others through tactless remarks, foolishly opinionated views, and intellectual conceit.

3 2 1 0 1 2 3

156. This person is absent-minded, daydreams, and is mentally disorganized concerning details.

3 2 1 0 1 2 3

157. This person has a tendency to become immersed in fantasies, resulting in a lack of grip on reality.

3 2 1 0 1 2 3

158. This person doesn't mince words-is harsh in speech and thought, and will often "tell it like it is" regardless of how others react to him. He must often remain silent in order to avoid creating controversy, and tends towards secrecy until ready to make his move.

Ex. 3 2 1 0 1 2 3 In.
 Str. Mod. Mi. Nil Mi. Mod. Str.

159. This person has a melancholy disposition, has blocked emotions, and has trouble making interpersonal contacts.

3 2 1 0 1 2 3

160. This person is restless, desires constant activity and stimulation, and is socially outgoing.

3 2 1 0 1 2 3

161. This person is too impulsive for his own good, and tends to be reckless and exhibit dangerous sudden behavior. He often disagrees with friends and associates, is nervous and excitable, and is prone to sudden tempers.

3 2 1 0 1 2 3

162. This person is a slave to dull routine, feels that life is drab, gets depressed, and is perceived by others as a stick-in-the-mud.

3 2 1 0 1 2 3

163. This person doesn't engage in social niceties unless there are definite pressures for doing so, is mentally proud and willful, and is unpopular.

Ex. 3 2 1 0 1 2 3 In.

164. This person, because of some eccentric form of obstinacy, is unpopular and a nuisance to others. He has few friends, and lacks common sense and adaptability.

3 2 1 0 1 2 3

165. This person suffers from some fear or neurosis, has strong feelings of inferiority, and feels lonely and self-pitying.

3 2 1 0 1 2 3

166. This person feels burdened with the "weight of the

world" on his shoulders.

- | | | | | | | | | |
|-----|------|------|-----|-----|-----|------|------|-----|
| | 3 | 2 | 1 | 0 | 1 | 2 | 3 | |
| Ex. | Str. | Mod. | Mi. | Nil | Mi. | Mod. | Str. | In. |
167. This person's ability to relate to others with warmth and friendliness is blocked. Other people find him cold and unresponsive, and he has few close friends.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
168. This person has strong physical vitality, is attractive to the opposite sex, functions well in his social relationships, and is self-confident and optimistic.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
169. This person has courage, leadership ability, decisiveness, ambition, self-confidence, physical strength and endurance, a strong sense of honor and integrity, and exhibits constructive enthusiasm.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
170. This person is honest, practical, circumspect and conservative. He exercises much discipline and works hard to achieve his ambitions.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
171. This person has vitality, self-confidence, a positive, magnanimous disposition, and willpower. He usually wins other people's cooperation.
- | | | | | | | | | |
|-----|---|---|---|---|---|---|---|-----|
| Ex. | 3 | 2 | 1 | 0 | 1 | 2 | 3 | In. |
|-----|---|---|---|---|---|---|---|-----|
172. This person has a sparkling effervescence to his personality that intrigues others, and is full of energy and determination.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
173. This person has a mind that is broad, tolerant and quick to comprehend. He communicates with ease and confidence, is gifted at speech making, is generous towards friends, and is optimistic.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
174. This person has a quick and intelligent mind, expresses himself fluently and persuasively, and has good rapport with others.
- | | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|

175. This person is fun-loving, sexy, naturally pleasing, and is at ease in his relationships with the opposite sex. He knows how to appeal to other people emotionally and expresses himself dynamically.

Ex. 3 2 1 0 1 2 3 In.
Str. Mod. Mi. Nil Mi. Mod. Str.

176. This person has a happy, optimistic, sociable disposition, has harmony in marital and domestic affairs, and has a sense of joy in living.

3 2 1 0 1 2 3

177. This person appears overly serious, reserved, cold, and unresponsive.

3 2 1 0 1 2 3

178. This person has an effervescent, fun-loving nature that tends to see the bright side of life. He is spontaneous, joyful, very popular, has lots of sex appeal and radiates happiness.

3 2 1 0 1 2 3

179. This person is popular, and his behavior is very smooth in social situations.

3 2 1 0 1 2 3

180. This person This person has a graceful, harmonious personal expression and appearance, has a gentle manner, is considerate, is popular, and receives the cooperation of others.

Ex. 3 2 1 0 1 2 3 In.

181. This person has charm, and a good sense of the social graces.

3 2 1 0 1 2 3

182. This person has willpower, decisiveness and a strong physical constitution. He leads an active life, has quick responses, and his strength and directness gain him the confidence and cooperation of others.

3 2 1 0 1 2 3

183. This person is serious, dignified, and even-tempered, and leads a stable life.

3 2 1 0 1 2 3

184. This person is optimistic, and seeks excitement.

Ex. ³ ² ¹ ⁰ ¹ ² ³
Str. Mod. Mi. Nil Mi. Mod. Str. In.

185. This person has a constructive and optimistic outlook on life, projects self-confidence, enthusiasm and goodwill, and inspires confidence and cooperation in others.

3 2 1 0 1 2 3

186. This person has a dignified and somewhat cautious and reserved manner-he doesn't act rashly. He fulfills his obligations towards others, and is considered rather cold.

3 2 1 0 1 2 3

187. This person has an unusual, bright, distinctive mode of personal expression. He is a natural leader because of his ability to spark enthusiasm in and gain the support and cooperation of others.

3 2 1 0 1 2 3

188. This person is much too optimistic and overexpansive in relating to others-he promises more than he can deliver, often makes unrealistic demands on others, and has a tendency to be arrogant and pompous.

3 2 1 0 1 2 3

189. This person's self-expression is blocked. He appears somewhat cold when trying to make friends, is reserved and formal, and has low vitality.

Ex. 3 2 1 0 1 2 3 In.

190. This person insists that everything be done his way. He is nervous, tense, and irritable, which often makes others uneasy in his presence.

3 2 1 0 1 2 3

191. This person talks incessantly about trivial matters, which irritates and confuses others. He takes criticism too personally, and is prone to nervousness and emotional excitability.

3 2 1 0 1 2 3

192. This person has a tendency towards emotional depression and stagnation, and lacks emotional flexi-

bility and optimism in his relationships in general.

- | | | | | | | | | |
|-----|------|------|-----|-----|-----|------|------|-----|
| Ex. | 3 | 2 | 1 | 0 | 1 | 2 | 3 | In. |
| | Str. | Mod. | Mi. | Nil | Mi. | Mod. | Str. | |
193. This person has an argumentative disposition and a "sharp tongue" and gets into verbal conflicts when he feels abused. He is a stickler for accuracy in thought and word, and has a nervous and hypersensitive disposition.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

194. This person tends to promise more than he can deliver, and tends towards woolgathering and daydreaming.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

195. This person is somewhat defensive and suspicious, is prone to depression and anxiety, and tends to look on the dark side of things.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

196. This person jumps to conclusions and makes snap judgments, has considerable nervous tension, and has trouble concentrating for a sustained period of time.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

197. This person is extremely sensitive, and is easily hurt by other peoples' unkindness.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

198. This person likes to be the center of attention, and is far from reticent. He generally gains the attention he wants.

Ex.	3	2	1	0	1	2	3	In.
-----	---	---	---	---	---	---	---	-----

199. This person has few pleasures in life, is often depressed, appears reserved, and is not particularly popular.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

200. This person appears outgoing and friendly, is mostly concerned with his own material well-being, and often antagonizes others by his opinionatedness and aggressiveness in promoting his own religious and philosophic viewpoint. He is inclined to boast and

exaggerate his own importance, and lacks steady, sustained, well-regulated effort.

Ex.	3	2	1	0	1	2	3	In.
	Str.	Mod.	Mi.	Nil	Mi.	Mod.	Str.	

201. This person is ill-tempered and irritable.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

202. This person has an ability to work hard, but lacks the capacity for disciplined, sustained effort. He is often irritable.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

203. This person is somewhat mistrustful of others, and is subject to irrational fears. He is reserved and anxious, which makes other people suspicious.

3	2	1	0	1	2	3
---	---	---	---	---	---	---

APPENDIX D

Astrological influences rated by astrologers

Instructions: Listed below are a large number of planetary positions and aspects. Essentially, your task will be to indicate which of these astrological influences concern either extroversion or introversion, and how strongly they might influence an individual in whose natal chart they appear to behave in an introverted or extroverted way (all other things being equal).

Hans Eysenck, a British psychologist, defines extroversion in the following way:

"The typical extrovert is sociable, likes parties, has many friends, needs to have people to talk to and does not like reading or studying by himself. He craves excitement, takes chances, often sticks his neck out, acts on the spur of the moment and is generally an impulsive individual. He is fond of practical jokes, always has a ready answer and generally likes change; he is carefree, easygoing, optimistic and likes to laugh and be merry. He prefers to keep moving and doing things, tends to be aggressive and lose his temper quickly; altogether his feelings are not kept under tight control and he is not always a reliable person."

On the other hand, Eysenck defines introversion in this fashion:

"The typical introvert is a quiet, retiring sort of person, introspective, fond of books rather than people; he is reserved and distant except to intimate friends. He tends to plan ahead, 'looks before he leaps', and distrusts the impulse of the moment. He does not like excitement, takes matters of everyday life with proper seriousness and likes a well ordered mode of life. He keeps his feelings under close control, seldom behaves in an aggressive manner and does not lose his temper

easily. He is reliable, somewhat pessimistic, and places great value on ethical standards."

It should be kept in mind that these sets of statements represent the extremes of extroversion and introversion.

On the list of astrological influences below (numbered 1-203):

- 1) Place an "E" in the space provided if a given astrological influence would predispose an individual to behave like an extrovert (as Eysenck defines the term).
- 2) Place an "I" in the space provided if a given astrological influence would predispose an individual to behave like an introvert (as Eysenck defines the term).
- 3) If you come across a planetary position or aspect on the list, that would not influence a person to be either extroverted or introverted as Eysenck defines these terms, but would have such an influence according to your definition of what extroversion and introversion involves, then place in the space provided either an "Ⓔ" (an "E" with a circle around it) to indicate a definition of extroversion other than Eysenck's, or an "Ⓘ" (an encircled "I") to indicate a definition of introversion other than Eysenck's.
- 4) Use the numbers 1, 2, or 3 to indicate the strength of the influence towards extroversion or introversion involved; after having placed either an E, Ⓔ, I, or Ⓘ in the space provided, mark either a "1" (to indicate a mild influence), or a "2" (to indicate a moderate influence) or a "3" (to indicate a strong influence).

Examples. (these are provided only for the sake of illustration):

<u>E 1</u>	205. Moon in Aries	209. Uranus in 1 st house	<u>Ⓔ 2</u>
<u>I 3</u>	207. Sun trine Mercury	210. Venus opp. Uranus	<u>Ⓘ 3</u>

- 5) If you view a given planetary position or aspect that is listed as either not having anything to do with extroversion or introversion, or as exerting an equal influence in both extroverted and introverted directions, then simply don't respond to it at all (in other words, leave it blank).

- 6) If there are planetary positions or aspects that are not listed that you feel influence whether a person acts in an extroverted or introverted way, please list these positions on the last page, along with ratings of the direction (E, E, I, or I), and of the strength of influence (1, 2, or 3).

E=Eysenck's def., extroversion

I=Eysenck's def., intraversion

I or E, if circled=personal def., intraversion or extroversion

1=mild
2=moderate
3=strong

132

- | | | |
|--|--------------------------------------|-------|
| _____ 1. Sun in Aries | 27. Mercury in Leo | _____ |
| _____ 2. Venus in Aries | 28. Venus in Leo | _____ |
| _____ 3. Mars in Aries | 29. Mars in Leo | _____ |
| _____ 4. Sun in 1 st house | 30. Jupiter in Leo | _____ |
| _____ 5. Mercury in 1 st house | 31. Sun in 5 th house | _____ |
| _____ 6. Venus in 1 st house | 32. Mercury in 5 th house | _____ |
| _____ 7. Mars in 1 st house | 33. Venus in 5 th house | _____ |
| _____ 8. Jupiter in 1 st house | 34. Mars in 5 th house | _____ |
| _____ 9. Saturn in 1 st house | 35. Sun in Virgo | _____ |
| _____ 10. Pluto in 1 st house | 36. Moon in Virgo | _____ |
| _____ 11. Sun in Gemini | 37. Mercury in Virgo | _____ |
| _____ 12. Moon in Gemini | 38. Venus in Virgo | _____ |
| _____ 13. Mercury in Gemini | 39. Mars in Virgo | _____ |
| _____ 14. Venus in Gemini | 40. Jupiter in Virgo | _____ |
| _____ 15. Mars in Gemini | 41. Saturn in Virgo | _____ |
| _____ 16. Jupiter in Gemini | 42. Moon in Virgo | _____ |
| _____ 17. Moon in 3 rd house | 43. Venus in Virgo | _____ |
| _____ 18. Venus in 3 rd house | 44. Sun in Libra | _____ |
| _____ 19. Jupiter in 3 rd house | 45. Moon in Libra | _____ |
| _____ 20. Saturn in 3 rd house | 46. Mercury in Libra | _____ |
| _____ 21. Sun in Cancer | 47. Venus in Libra | _____ |
| _____ 22. Moon in Cancer | 48. Mars in Libra | _____ |
| _____ 23. Venus in Cancer | 49. Sun in 7 th house | _____ |
| _____ 24. Saturn in Cancer | 50. Mercury in 7 th house | _____ |
| _____ 25. Sun in Leo | 51. Venus in 7 th house | _____ |
| _____ 26. Moon in Leo | 52. Mars in 7 th house | _____ |

1=mild
2=moderate
3=strong

Intraversion. Extroversion

I, E for Eysenck def. 133

①, ② for personal def.

- | | | |
|--|---------------------------------------|-------|
| _____ 53. Jupiter in 7 th house | 79. Moon in 11 th house | _____ |
| _____ 54. Saturn in 7 th house | 80. Mercury in 11 th house | _____ |
| _____ 55. Neptune in 7 th house | 81. Venus in 11 th house | _____ |
| _____ 56. Sun in Scorpio | 82. Mars in 11 th house | _____ |
| _____ 57. Moon in Scorpio | 83. Jupiter in 11 th house | _____ |
| _____ 58. Mercury in Scorpio | 84. Uranus in 11 th house | _____ |
| _____ 59. Venus in Scorpio | 85. Sun in Pisces | _____ |
| _____ 60. Mars in Scorpio | 86. Moon in Pisces | _____ |
| _____ 61. Saturn in Scorpio | 87. Mercury in Pisces | _____ |
| _____ 62. Mercury in 8 th house | 88. Venus in Pisces | _____ |
| _____ 63. Venus in 8 th house | 89. Mars in Pisces | _____ |
| _____ 64. Pluto in 8 th house | 90. Saturn in Pisces | _____ |
| _____ 65. Sun in Saggittarius | 91. Sun in 12 th house | _____ |
| _____ 66. Moon in Saggittarius | 92. Mercury in 12 th house | _____ |
| _____ 67. Venus in Saggittarius | 93. Venus in 12 th house | _____ |
| _____ 68. Mars in Saggittarius | 94. Mars in 12 th house | _____ |
| _____ 69. Sun in Capricorn | 95. Jupiter in 12 th house | _____ |
| _____ 70. Moon in Capricorn | 96. Neptune in 12 th house | _____ |
| _____ 71. Venus in Capricorn | 97. Sun conjunct Venus | _____ |
| _____ 72. Saturn in Capricorn | 98. Sun conjunct Jupiter | _____ |
| _____ 73. Sun in 10 th house | 99. Sun conjunct Saturn | _____ |
| _____ 74. Sun in Aquarius | 100. Moon conjunct Saturn | _____ |
| _____ 75. Mercury in Aquarius | 101. Moon conjunct North Node | _____ |
| _____ 76. Venus in Aquarius | 102. Moon conjunct South Node | _____ |
| _____ 77. Jupiter in Aquarius | 103. Mercury conjunct Venus | _____ |
| _____ 78. Sun in 11 th house | 104. Mercury conjunct Mars | _____ |

1=mild

2=moderate

3=strong

Intraversion, Extroversion

I, E for Eysenck def. 134

①, ② for personal def.

<input type="checkbox"/> 105. Mercury conjunct Neptune	<input type="checkbox"/> 128. Mercury sextile Jupiter
<input type="checkbox"/> 106. Mercury conjunct North Node	<input type="checkbox"/> 129. Mercury sextile Saturn
<input type="checkbox"/> 107. Mercury conjunct descendant	<input type="checkbox"/> 130. Venus sextile Mars
<input type="checkbox"/> 108. Venus conjunct Mars	<input type="checkbox"/> 131. Venus sextile Jupiter
<input type="checkbox"/> 109. Venus conjunct Jupiter	<input type="checkbox"/> 132. Venus sextile Uranus
<input type="checkbox"/> 110. Venus conjunct Saturn	<input type="checkbox"/> 133. Venus, sextile Ascendant and trine Descendant
<input type="checkbox"/> 111. Venus conjunct Uranus	<input type="checkbox"/> 134. Mars sextile Saturn
<input type="checkbox"/> 112. Venus conjunct North Node	<input type="checkbox"/> 135. Mars sextile Uranus
<input type="checkbox"/> 113. Venus conjunct South Node	<input type="checkbox"/> 136. Mars sextile Pluto
<input type="checkbox"/> 114. Mars conjunct Uranus	<input type="checkbox"/> 137. Mars, sextile Ascendant and trine Descendant
<input type="checkbox"/> 115. Mars conjunct Ascendant	<input type="checkbox"/> 138. Jupiter sextile Uranus
<input type="checkbox"/> 116. Jupiter conjunct Saturn	<input type="checkbox"/> 139. Jupiter, sextile Ascendant trine Descendant
<input type="checkbox"/> 117. Jupiter conjunct Ascendant	<input type="checkbox"/> 140. Saturn sextile Uranus
<input type="checkbox"/> 118. Saturn conjunct Pluto	<input type="checkbox"/> 141. Saturn, sextile Ascendant trine Descendant
<input type="checkbox"/> 119. Saturn conjunct Ascendant	<input type="checkbox"/> 142. Saturn, sextile M.C. trine Nadir
<input type="checkbox"/> 120. Saturn conjunct Descendant	<input type="checkbox"/> 143. Uranus, sextile Ascendant trine Descendant
<input type="checkbox"/> 121. North node conjunct Ascendant	<input type="checkbox"/> 144. Sun square Moon
<input type="checkbox"/> 122. Sun sextile Moon	<input type="checkbox"/> 145. Sun square Mars
<input type="checkbox"/> 123. Sun sextile Jupiter	<input type="checkbox"/> 146. Sun square Saturn
<input type="checkbox"/> 124. Moon sextile Venus	<input type="checkbox"/> 147. Sun square Neptune
<input type="checkbox"/> 125. Moon sextile Jupiter	<input type="checkbox"/> 148. Sun square Pluto
<input type="checkbox"/> 126. Moon sextile Uranus	<input type="checkbox"/> 149. Sun, square Ascendant and Descendant
<input type="checkbox"/> 127. Mercury sextile Mars	

1=mild

2=moderate

3=strong

Intraversion, Extroversion

I, E for Eysenck def.

(I), (E) for personal def.

135

- | | | |
|---|---|-------|
| _____ 150. Moon square Mars | 175. Venus trine Mars | _____ |
| _____ 151. Moon square Saturn | 176. Venus trine Jupiter | _____ |
| _____ 152. Moon square Pluto | 177. Venus trine Saturn | _____ |
| _____ 153. Mercury square Mars | 178. Venus trine Uranus | _____ |
| _____ 154. Mercury square Saturn | 179. Venus, trine North Node
sextile South Node | _____ |
| _____ 155. Mercury square Uranus | 180. Venus, trine Ascendant
sextile Descendant | _____ |
| _____ 156. Mercury square Neptune | 181. Venus, trine M.C. sex-
tile Nadir. | _____ |
| _____ 157. Moon square Neptune | 182. Mars, trine Ascendant
sextile Descendant | _____ |
| _____ 158. Mercury square Pluto | 183. Jupiter trine Saturn | _____ |
| _____ 159. Venus square Saturn | 184. Jupiter trine Uranus | _____ |
| _____ 160. Mars square Jupiter | 185. Jupiter, trine Ascendant
sextile Descendant | _____ |
| _____ 161. Mars square Uranus | 186. Saturn, trine Ascendant
sextile Descendant | _____ |
| _____ 162. Jupiter square Saturn | 187. Uranus, trine Ascendant
sextile Descendant | _____ |
| _____ 163. Jupiter square Pluto | 188. Sun opposition Jupiter | _____ |
| _____ 164. Saturn square Uranus | 189. Sun opposition Saturn | _____ |
| _____ 165. Saturn square Neptune | 190. Sun opposition Uranus | _____ |
| _____ 166. Saturn square Pluto | 191. Moon opposition Mercury | _____ |
| _____ 167. Saturn, square Ascendant
and Descendant | 192. Moon opposition Saturn | _____ |
| _____ 168. Sun trine Moon | 193. Mercury opposition Mars | _____ |
| _____ 169. Sun trine Mars | 194. Mercury opposition
Jupiter | _____ |
| _____ 170. Sun trine Saturn | 195. Mercury opposition
Saturn | _____ |
| _____ 171. Sun, trine Ascendant
sextile Descendant | 196. Mercury opposition
Uranus | _____ |
| _____ 172. Moon trine Uranus | | |
| _____ 173. Mercury trine Jupiter | | |
| _____ 174. Mercury, trine Ascendant
sextile Descendant | | |

1=mild

2=moderate

3=strong

Intraversion, Extroversion

I, E for Eysenck def.

①, ② for personal def.

136

- ____ 197. Venus opposition Mars
- ____ 198. Venus opposition Jupiter
- ____ 199. Venus opposition Saturn
- ____ 200. Mars opposition Jupiter
- ____ 201. Mars opposition Uranus
- ____ 202. Saturn opposition Uranus
- ____ 203. Saturn opposition Neptune

APPENDIX E

Astrological "scales" (ratings) of
extroversion of Experiment #1

Table 9
Guide to abbreviations used in Appendix E

Abbreviation	Meaning
1) Aspects	
cj	conjunction
sx	sextile
sq	square
tr	trine
op	opposition
2) Planets	
Merc	mercury
Jup	Jupiter
Sat	Saturn
Uran	Uranus
Nept	Neptune
3) Ratings for astrological measures of extroversion.	
Stu	ratings of astrological influences for Ast/EI-Stu.*
Ast. LH	ratings by astrologer LH which comprise Ast/EI-LH.*
Ast. DH	ratings by astrologer DH which comprise Ast/EI-DH.*
Ast. JS	ratings by astrologer JS which comprise Ast/EI-JS.*
Ast-Ov	composite (overall) ratings of astrologers.*
4) Signs	
Scor	Scorpio
Sag	Sagittarius
Cap	Capricorn
Aq	Aquarius

(Continued on
next page)

Table 9 (Cont'd)

Abbreviation	Meaning
5)Other	
/	this symbol stands for "in", as in Sun/Aries (Sun in Aries).
H	stands for astrological "house", as in H1 (house #1).
Asc	the ascendant, the first cusp of the horoscope.
Desc	the descendant, the seventh cusp of the horoscope
MC	stands for the latin words <u>medium coeli</u> , meaning "middle of the sky" or midheaven-this the tenth cusp of the horoscope.

*See pages 50-55 above for further information about these ratings and the astrological measures of extroversion they comprise.

Astro. influence	Ratings				
	Stu.	Ast.LH	Ast.DH	Ast.JS	Ast-Ov
1)Sun/Aries	2.8	3.0	1.0	3.0	2.3
2)Venus/Aries	2.7	2.0	2.0	1.0	1.7
3)Mars/Aries	2.5	3.0	2.0	2.0	2.3
4)Sun/H1	1.7	3.0	2.0	2.0	2.3
5)Merc/H1	1.6	-1.0	2.0	1.0	0.0
6)Venus/H1	1.7	1.0	2.0	1.0	1.3
7)Mars/H1	2.9	3.0	1.0	1.0	1.7
8)Jup/H1	1.5	2.0	2.0	1.0	1.7
9)Sat/H1	-2.6	-3.0	-2.0	-3.0	-2.7
10)Pluto/H1	-2.5	-3.0	0.0	-3.0	-3.0
11)Sun/Gemini	1.5	2.0	3.0	3.0	2.7
12)Moon/Gemini	2.0	2.0	2.0	2.0	2.0
13)Merc/Gemini	1.7	1.0	2.0	1.0	1.3
14)Venus/Gemini	1.9	2.0	1.0	1.0	1.3
15)Mars/Gemini	0.0	3.0	2.0	1.0	2.0
16)Jup/Gemini	0.0	1.0	2.0	2.0	1.7
17)Moon/H3	0.0	-2.0	2.0	-1.0	0.0
18)Venus/H3	0.0	2.0	1.0	1.0	1.3
19)Jup/H3	0.0	3.0	2.0	2.0	2.3
20)Sat/H3	-1.6	-3.0	-3.0	-1.0	-2.3
21)Sun/Cancer	0.0	-3.0	-2.0	-1.0	-2.0
22)Moon/Cancer	-1.9	-3.0	-2.0	-1.0	-2.0
23)Venus/Cancer	0.0	-2.0	0.0	-1.0	-1.5
24)Sat/Cancer	-2.5	-3.0	0.0	-2.0	-2.5
25)Sun/Leo	3.0	3.0	2.0	3.0	2.7
26)Moon/Leo	2.2	3.0	2.0	2.0	2.3
27)Merc/Leo	2.0	2.0	2.0	2.0	2.0
28)Venus/Leo	1.7	2.0	1.0	1.0	1.3
29)Mars/Leo	1.5	3.0	2.0	3.0	2.6
30)Jup/Leo	2.3	3.0	2.0	2.0	2.3
31)Sun/H5	2.9	2.0	2.0	1.0	1.7

Astro. influence	Ratings				
	Stu.	Ast.LH	Ast.DH	Ast.JS	Ast-Ov
32)Merc/H5	0.0	1.0	2.0	1.0	1.3
33)Venus/H5	1.5	1.0	1.0	1.0	1.0
34)Mars/H5	2.2	3.0	2.0	2.0	2.3
35)Sun/Virgo	-1.7	-1.0	-2.0	-1.0	-1.3
36)Moon/Virgo	-2.5	-2.0	-2.0	-1.0	-1.7
37)Merc/Virgo	-1.4	-1.0	0.0	-1.0	-1.0
38)Venus/Virgo	0.0	-3.0	-2.0	-1.0	-2.0
39)Mars/Virgo	-1.7	2.0	-1.0	-1.0	0.0
40)Jup/Virgo	0.0	1.0	0.0	1.0	1.0
41)Sat/Virgo	-2.1	-3.0	-3.0	-1.0	-2.3
42)Moon/H6	0.0	-3.0	-2.0	-1.0	-2.0
43)Venus/H6	0.0	-3.0	-2.0	-1.0	-2.0
44)Sun/Libra	2.0	-2.0	1.0	1.0	0.0
45)Moon/Libra	0.0	1.0	1.0	1.0	1.0
46)Merc/Libra	0.0	-2.0	2.0	1.0	0.0
47)Venus/Libra	0.0	2.0	2.0	1.0	1.7
48)Mars/Libra	2.1	2.0	1.0	1.0	1.3
49)Sun/H7	2.0	2.0	2.0	1.0	1.7
50)Merc/H7	1.3	1.0	2.0	1.0	1.3
51)Venus/H7	1.7	1.0	2.0	1.0	1.3
52)Mars/H7	2.0	3.0	2.0	1.0	2.0
53)Jup/H7	1.3	2.0	2.0	1.0	1.7
54)Sat/H7	0.0	-3.0	-1.0	-1.0	-1.7
55)Nept/H7	0.0	-1.0	-1.0	1.0	0.0
56)Sun/Scor	-2.3	2.0	-3.0	-1.0	0.0
57)Moon/Scor	-1.9	3.0	-2.0	-1.0	0.0
58)Merc/Scor	-2.3	2.0	-2.0	-1.0	0.0
59)Venus/Scor	-2.3	-1.0	-2.0	-1.0	-1.3
60)Mars/Scor	0.0	3.0	-2.0	-1.0	0.0
61)Sat/Scor	-1.8	-3.0	-3.0	-1.0	-2.3

Astro. influence	Ratings				
	Stu.	Ast.LH	Ast.DH	Ast.JS	Ast-Ov
62)Merc/H8	-2.0	1.0	-2.0	1.0	0.0
63)Venus/H8	0.0	-1.0	-2.0	1.0	0.0
64)Pluto/H8	-1.5	-3.0	-2.0	1.0	0.0
65)Sun/Sag	1.5	2.0	3.0	3.0	2.7
66)Moon/Sag	1.5	3.0	2.0	2.0	2.3
67)Venus/Sag	2.2	2.0	1.0	2.0	1.7
68)Mars/Sag	1.6	2.0	2.0	3.0	2.3
69)Sun/Cap	-1.6	-2.0	-1.0	-1.0	-1.3
70)Moon/Cap	-2.5	-3.0	0.0	-1.0	-2.0
71)Venus/Cap	-1.9	-2.0	0.0	-1.0	-1.5
72)Sat/Cap	-1.3	-2.0	-2.0	-2.0	-2.0
73)Sun/H10	-1.5	1.0	2.0	3.0	2.0
74)Sun/Aq	1.3	2.0	2.0	3.0	2.3
75)Merc/Aq	1.7	-1.0	2.0	2.0	0.0
76)Venus/Aq	2.0	2.0	1.0	2.0	1.7
77)Jup/Aq	1.7	2.0	2.0	2.0	2.0
78)Sun/H11	1.4	1.0	2.0	3.0	2.0
79)Moon/H11	2.5	2.0	2.0	1.0	1.7
80)Merc/H11	1.8	1.0	2.0	1.0	1.3
81)Venus/H11	1.7	2.0	2.0	1.0	1.7
82)Mars/H11	1.9	3.0	2.0	1.0	2.0
83)Jup/H11	1.5	3.0	3.0	2.0	2.7
84)Uran/H11	0.0	1.0	2.0	3.0	2.0
85)Sun/Pisces	0.0	-2.0	-2.0	-1.0	-1.7
86)Moon/Pisces	-2.3	-3.0	-2.0	-1.0	-2.0
87)Merc/Pisces	-2.2	-1.0	-1.0	-1.0	-1.0
88)Venus/Pisces	0.0	-1.0	-1.0	-1.0	-1.0
89)Mars/Pisces	-1.5	-2.0	-2.0	-1.0	-1.7
90)Sat/Pisces	-1.2	-3.0	-2.0	-1.0	-2.0
91)Sun/H12	-1.7	-2.0	-2.0	-1.0	-1.7

Astro. influence.	Ratings				
	Stu.	Ast.LH	Ast.DH	Ast.JS	Ast-Ov
92)Merc/H12	-2.2	-2.0	-2.0	-1.0	-1.7
93)Venus/H12	-2.1	-1.0	-1.0	-1.0	-1.0
94)Mars/H12	-2.1	-3.0	0.0	-1.0	-2.0
95)Jup/H12	-2.3	1.0	0.0	-1.0	0.0
96)Nept/H12	-2.2	-3.0	0.0	-1.0	-2.0
97)Sun cj Venus	2.3	2.0	1.0	2.0	1.7
98)Sun cj Jup	2.0	2.0	3.0	2.0	2.3
99)Sun cj Sat	-1.8	-2.0	-2.0	-1.0	-1.7
100)Moon cj Sat	-2.2	-3.0	-1.0	-2.0	-2.0
101)Moon cj N.Node	1.9	1.0	0.0	0.0	0.0
102)Moon cj S.Node	-2.1	1.0	0.0	0.0	0.0
103)Merc cj Venus	0.9	2.0	2.0	1.0	1.7
104)Merc cj Mars	1.5	3.0	2.0	1.0	2.0
105)Merc cj Nept	-1.9	-2.0	0.0	-1.0	-1.5
106)Merc cj S.Node	0.0	1.0	0.0	0.0	0.0
107)Merc cj Desc	1.7	2.0	2.0	-1.0	0.0
108)Venus cj Mars	2.1	2.0	0.0	3.0	2.5
109)Venus cj Jup	2.0	2.0	2.0	3.0	2.3
110)Venus cj Sat	-1.2	-2.0	-2.0	-2.0	-2.0
111)Venus cj Uran	2.6	3.0	2.0	2.0	2.3
112)Venus cj N.Node	0.0	1.0	0.0	0.0	0.0
113)Venus cj S.Node	-1.6	-1.0	0.0	0.0	0.0
114)Mars cj Nept	2.7	3.0	1.0	2.0	2.0
115)Mars cj Asc	2.2	3.0	2.0	1.0	2.0
116)Jup cj Sat	-1.7	0.0	0.0	1.0	0.0
117)Jup cj Asc	1.3	2.0	3.0	1.0	2.0
118)Sat cj Pluto	-1.8	-3.0	0.0	-3.0	-3.0
119)Sat cj Asc	-2.4	-2.0	-3.0	-1.0	-2.0
120)Sat cj Desc	-1.9	-3.0	-2.0	-1.0	-2.0
121)N.Node cj Asc	2.2	1.0	0.0	0.0	0.0
122)Sun sx Moon	0.0	2.0	1.0	1.0	1.3

Astro. influence	Ratings				
	Stu.	Ast.LH	Ast.DH	Ast.JS	Ast-Ov
123)Sun sx Jup	1.1	3.0	2.0	3.0	2.7
124)Moon sx Venus	1.6	1.0	1.0	2.0	1.3
125)Moon sx Jup	1.0	2.0	2.0	3.0	2.3
126)Moon sx Uran	1.9	2.0	2.0	2.0	2.0
127)Merc sx Mars	0.0	2.0	2.0	2.0	2.0
128)Merc sx Jup	0.9	2.0	2.0	3.0	2.3
129)Merc sx Sat	-1.5	-2.0	-1.0	-1.0	-1.3
130)Venus sx Mars	2.5	1.0	0.0	1.0	1.0
131)Venus sx Jup	2.2	2.0	2.0	2.0	2.0
132)Venus sx Uran	2.3	2.0	2.0	2.0	2.0
133)Venus sx Asc	1.4	1.0	2.0	1.0	1.3
134)Mars sx Sat	-1.7	1.0	0.0	1.0	1.0
135)Mars sx Uran	1.3	2.0	1.0	1.0	1.3
136)Mars sx Pluto	0.0	2.0	0.0	1.0	1.5
137)Mars sx Asc	1.3	1.0	1.0	1.0	1.0
138)Jup sx Uran	1.5	2.0	2.0	2.0	2.0
139)Jup sx Asc	1.8	2.0	2.0	1.0	1.7
140)Sat sx Uran	0.0	-1.0	0.0	1.0	-1.0
141)Sat sx Asc	-2.3	-2.0	-1.0	1.0	0.0
142)Sat sx MC	0.0	-2.0	-1.0	1.0	0.0
143)Uran sx Asc	0.0	1.0	0.0	2.0	1.5
144)Sun sq Moon	-1.2	1.0	-1.0	-1.0	0.0
145)Sun sq Mars	1.9	2.0	0.0	1.0	1.5
146)Sun sq Sat	0.0	-2.0	-2.0	-1.0	-1.7
147)Sun sq Nept	-1.3	-3.0	-2.0	-1.0	-2.0
148)Sun sq Pluto	1.6	-3.0	-1.0	-2.0	-2.0
149)Sun sq Asc	0.0	2.0	-1.0	-1.0	0.0
150)Moon sq Mars	1.8	3.0	1.0	-2.0	0.0
151)Moon sq Sat	-2.3	-3.0	-2.0	-3.0	-2.7
152)Moon sq Pluto	0.0	-3.0	-2.0	-3.0	-2.7
153)Merc sq Mars	0.0	2.0	1.0	-1.0	0.0

Astro. influence.	Ratings				
	Stu.	Ast.LH	Ast.DH	Ast.JS	Ast-Ov
154)Merc sq Sat	-1.8	-2.0	-3.0	-2.0	-2.3
155)Merc sq Uran	1.8	2.0	2.0	1.0	1.7
156)Merc sq Nept	0.0	-2.0	0.0	1.0	0.0
157)Moon sq Nept	-1.5	-3.0	0.0	-1.0	0.0
158)Merc sq Pluto	0.0	-2.0	-1.0	-1.0	-1.3
159)Venus sq Sat	-2.0	-2.0	0.0	-2.0	-2.0
160)Mars sq Jup	2.6	3.0	0.0	-1.0	0.0
161)Mars sq Uran	2.2	3.0	0.0	-1.0	0.0
162)Jup sq Sat	-1.6	-2.0	0.0	-2.0	-2.0
163)Jup sq Pluto	0.0	-3.0	2.0	1.0	0.0
164)Sat sq Uran	0.0	-3.0	0.0	-1.0	-2.0
165)Sat sq Nept	0.0	-3.0	-2.0	-2.0	-2.3
166)Sat sq Pluto	-1.3	-3.0	-3.0	-3.0	-3.0
167)Sat sq Asc	-1.9	-3.0	-3.0	-1.0	-2.3
168)Sun tr Moon	1.6	2.0	1.0	1.0	1.3
169)Sun tr Mars	0.0	2.0	2.0	2.0	2.0
170)Sun tr Sat	-1.2	2.0	-1.0	1.0	0.0
171)Sun tr Asc	1.1	2.0	2.0	1.0	1.7
172)Moon tr Uran	1.5	2.0	2.0	1.0	1.7
173)Merc tr Jup	1.1	2.0	3.0	2.0	0.0
174)Merc tr Asx	1.0	1.0	2.0	1.0	1.3
175)Venus tr Mars	1.8	1.0	1.0	1.0	1.0
176)Venus tr Jup	1.4	2.0	3.0	2.0	2.3
177)Venus tr Sat	-2.1	-1.0	-2.0	1.0	0.0
178)Venus tr Uran	1.8	2.0	0.0	2.0	2.0
179)Venus tr N.Node	1.8	1.0	0.0	0.0	0.0
180)Venus tr Asc	0.9	1.0	1.0	1.0	1.0
181)Venus tr MC	0.9	2.0	1.0	2.0	1.7
182)Mars tr Asc	1.5	2.0	0.0	2.0	2.0
183)Jup tr Sat	0.0	1.0	0.0	1.0	1.0
184)Jup tr Uran	2.1	2.0	3.0	2.0	2.3
185)Jup tr Asc	1.6	2.0	3.0	1.0	2.0

Astro. influence	Ratings				
	Stu.	Ast.LH	Ast.DH	Ast.JS	Ast-Ov
186)Sat tr Asc	-2.3	-2.0	-1.0	-2.0	-1.7
187)Uran tr Asc	1.7	2.0	0.0	2.0	2.0
188)Sun op Jup	2.4	3.0	2.0	2.0	2.3
189)Sun op Sat	-2.2	-3.0	-2.0	-2.0	-2.3
190)Sun op Uran	0.0	3.0	1.0	0.0	2.0
191)Moon op Merc	0.0	1.0	1.0	-2.0	0.0
192)Moon op Sat	0.0	-3.0	-2.0	-2.0	-2.3
193)Merc op Mars	0.0	3.0	2.0	1.0	2.0
194)Merc op Jup	0.0	3.0	3.0	-1.0	0.0
195)Merc op Sat	-1.3	-2.0	-2.0	-1.0	-1.7
196)Merc op Uran	1.1	3.0	1.0	0.0	2.0
197)Venus op Mars	0.0	-2.0	0.0	2.0	0.0
198)Venus op Jup	2.0	3.0	2.0	-1.0	0.0
199)Venus op Sat	-1.5	-1.0	-2.0	-2.0	-1.7
200)Mars op Jup	1.8	2.0	2.0	2.0	2.0
201)Mars op Uran	0.0	3.0	2.0	2.0	2.3
202)Sat op Uran	0.0	2.0	0.0	-1.0	0.0
203)Sat op Nept	-1.4	-3.0	0.0	-2.0	1.7

REFERENCES

- Barth, J.R. and Benett, J.T. Astrology and modern science revisited. Leonardo, 1974, Vol. 7, 235-237.
- Bem, S.L. The measurement of psychological androgyny. Journal of Counseling and Clinical Psychology, 1974, Vol. 42(2), 155-162.
- Bok, B.J. A critical look at astrology. Humanist, 1975, Vol. 35(5), 6-9.
- Brown, F.A. Persistent activity rhythms in the oyster. American Journal of Physiology, 1954, Vol. 178(3), 510-514.
- Chapman, L.J. A search for lunacy. Journal of Nervous and Mental Diseases, 1961, Vol. 132, 171-174.
- Constantinople, A. Masculinity-femininity: an exception to a famous dictum? Psychological Bulletin, 1973, Vol. 80(5), 389-407.
- Cooper, J. and Smithers, A. Do the seasons govern your career? New Society, 1975, Vol. 24(548), 6-8.
- Delaney, J.G. and Woodyard, H.D. Effects of reading an astrological description on responding to a personality inventory. Psychological Reports, 1974, Vol. 34, 1214.
- Eysenck, H.J. and Eysenck, S.B.G. Manual, Eysenck Personality Inventory. San Diego, Ca.: Educational and Industrial Testing Service, 1968.
- Eysenck, S.B.G. and Eysenck, H.J. The personality of judges as a factor in the validity of their judgments of

- extroversion-intraversion. British Journal of Social and Clinical Psychology, 1964, Vol. 3, 141-144.
- Forer, B.R. The fallacy of personal validation: a classroom demonstration of gullibility. Journal of Abnormal and Social Psychology, 1949, Vol. 44, 118-123.
- Gauquelin, M. Les hommes et les astres. Paris: Editions Denoel, 1960.
- Gauquelin, M. Songes et mensonges de l'astrologie. France: Librairie Hachette, 1969.
- Gauquelin, M. [The scientific basis of astrology] (translation by J. Hughes). New York: Stein and Day, 1970. (Originally published, 1966.)
- Gauquelin, M., Gauquelin, F., and Eysenck, S.B.C. Personality and positions of the planets at birth: an empirical study. To appear in the British Journal of Social and Clinical Psychology.
- Marcharg, S.J. The use of the natal chart in the identification of alcoholism and a comparison of its diagnostic efficiency with the MMPI. Dissertation Abstracts International, 1976(May), Vol. 36(11-A), 7213.
- Mayo, J., White, O., and Eysenck, H.J. An empirical study of the relation between astrological factors and personality. To appear in the Journal of Social Psychology.
- Megargee, E.I. The California Psychological Inventory Handbook. London: Jossey-Bass, Inc., 1972.

- Menaker, W. Lunar periodicity with reference to live births. American Journal of Obstetrics and Gynecology, 1967, Vol. 98, 1002-1004.
- Nelson, J.H. Planetary position effects on shortwave signal qualities. Electrical Engineering, 1952, Vol. 71, 421.
- Newmeyer, J.A., and Anderson, S. Astrology and addiction: an empirical probe. Drug Forum, 1973, Vol. 2(3), 271-277.
- Pellegrini, R.J. The astrological theory of personality: an unbiased test by a biased observer. Journal of Psychology, 1975, Vol. 85, 21-28.
- Rosen, G.M. Effects of source prestige on subjects' acceptance of the Barnum effect: psychologist versus astrologer. Journal of Consulting and Clinical Psychology, 1975, Vol. 43(1), 95.
- Sakoian, F.S. and Acker, L.S. The astrologer's handbook. New York: Harper and Row, 1973.
- Sehested, O.H. The basics of astrology, Vol. II. Woodland Hills, Ca.: Uranus Publishing Company, 1973.
- Silverman, B.I. Studies of astrology. Journal of Psychology, 1971, Vol. 77, 141-149.
- Silverman, B.I. and Whitmer, M. Astrological indicators of personality. Journal of Psychology, 1974, Vol. 87, 89-95.
- Snyder, C.R. Why horoscopes are true: the effects of specificity on acceptance of astrological interpretations.

Journal of Consulting Psychology, 1974, Vol. 30(4), 577-580.

Snyder, C.R., Larsen, D.L., and Bloom, L.J. Acceptance of general personality interpretations prior to and after receipt of diagnostic feedback supposedly based on psychological, graphological, and astrological assessment procedures. Journal of Clinical Psychology, 1976, Vol. 32(2), 258-265.

Sundberg, N.D. The acceptability of "fake" versus "bona fide" personality test interpretations. Journal of Abnormal and Social Psychology, 1955, Vol. 50, 145-147.

Tiggle, R.B. Development of an astrological hostility scale and its relationship with the Buss-Durkee Inventory. Master's Thesis, California State University (Long Beach), 1976.

Vingoe, F.T. Validity of the Eysenck Extroversion Scale as determined by self-ratings in normals. British Journal of Social and Clinical Psychology, 1966, Vol. 5, 89-91.

Webster's New World Dictionary, William Collins + World Publishing Co., Inc., second edition, 1975.

West, J.A. and Toonder, J.G. The case for astrology. Baltimore, Md.:Penguin Books, Inc., 1973.

VITA AUCTORIS

Michael Rockowitz was born on December 1, 1951 in Brooklyn, New York. In June, 1969, he graduated from Francis Lewis High School in Queens, New York. In June, 1976, he graduated with the Bachelor of Arts degree from Queens College of the City University of New York. Since September, 1976, he has been enrolled in the graduate program in clinical psychology at the University of Windsor.

Michael Rockowitz is married to the former Jill Laufer.